Apex Laboratories, LLC
6700 SW Sandburg St. Tigard, Oregon 97223
503.718.2323

Level IV Data Package for
Hahn and Associates
Mult 802 Decommissioning
Apex Laboratories Work Order number:
A9F0692

APEX LABORATORIES, LLC
6700 SW Sandburg St Tigard, OR 97223 phone 503-718-2323

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A9F0692

Analytical Case Narrative

Analytical Case Narrative

Client: Hahn and Associates Date: 10/17/2019
Project: Mult 802 Decommissioning
Apex Work Order Number: A9F0692

This data package contains data associated with analysis of samples for the above referenced Apex work order numbers. The data package Table of Contents, along with the PDF bookmarks, allow for ease of navigation and location of items within the data deliverable.

The Sample Receipt Documentation section of this package contains sample receipt information, including sample temperature and condition of receipt documented on Cooler Receipt Form(s). Apex analyzed the samples by the methods indicated on the Chain of Custody. Any additional analyses requested are indicated on the Apex Work Order.

If any anomalies were encountered during analysis that could potentially impact data quality, sample results are qualified and/or a separate Case Narrative is included in the Analytical Report. Please refer to the Notes and Definition section of the Analytical Report(s) for Qualifier explanations, Conventions, and the Blank Policy.

Data represented in this package are in compliance with the referenced method(s), both technically and for completeness, for all conditions other than those stated above and/or noted by qualification of the reported data. The signature below verifies that the Laboratory Director or his designee has authorized release of this data package.

Estella Rieben,
Quality Systems Manager
Apex Laboratories, LLC

Analytical Report

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
EPA ID: OR01039

Thursday, June 27, 2019

Rob Ede
Hahn and Associates
434 NW 6th Ave. Suite 203
Portland, OR 97209

RE: A9F0692 - Mult 802 Decommissioning - Mult 802 Pump Test--2708-60F

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A9F0692, which was received by the laboratory on 6/21/2019 at 11:37:00AM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: pnerenberg@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of final reporting, unless prior arrangements have been made.

Cooler Receipt Information

(See Cooler Receipt Form for details)

Cooler #1	0.6 degC

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.
All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.

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Philip Nerenberg, Lab Director

Apex Laboratories, LLC

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Tigard, OR 97223
503-718-2323
EPA ID: OR01039

Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **Mult 802 Pump Test--2708-(**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0692 - 06 27 19 1639**

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
2708-190620-MULT802-TB	A9F0692-01	Water	06/20/19 14:00	06/21/19 11:37
2708-190620-MULT802-107	A9F0692-02	Water	06/20/19 14:30	06/21/19 11:37
2708-190620-MULT802-108	A9F0692-03	Water	06/20/19 16:10	06/21/19 11:37

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Philip Nerenberg, Lab Director

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EPA ID: OR01039

Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **Mult 802 Pump Test--2708-(**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0692 - 06 27 19 1639**

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
2708-190620-MULT802-TB (A9F0692-01)				**Matrix: Water**		**Batch: 9061200**		
Acetone	**27.1**	---	20.0	ug/L	1	06/24/19 10:48	EPA 8260C	
Acrylonitrile	ND	---	2.00	ug/L	1	06/24/19 10:48	EPA 8260C	
Benzene	ND	---	0.200	ug/L	1	06/24/19 10:48	EPA 8260C	
Bromobenzene	ND	---	0.500	ug/L	1	06/24/19 10:48	EPA 8260C	
Bromochloromethane	ND	---	1.00	ug/L	1	06/24/19 10:48	EPA 8260C	
Bromodichloromethane	ND	---	1.00	ug/L	1	06/24/19 10:48	EPA 8260C	
Bromoform	ND	---	1.00	ug/L	1	06/24/19 10:48	EPA 8260C	
Bromomethane	ND	---	5.00	ug/L	1	06/24/19 10:48	EPA 8260C	
2-Butanone (MEK)	ND	---	10.0	ug/L	1	06/24/19 10:48	EPA 8260C	
n-Butylbenzene	ND	---	1.00	ug/L	1	06/24/19 10:48	EPA 8260C	
sec-Butylbenzene	ND	---	1.00	ug/L	1	06/24/19 10:48	EPA 8260C	
tert-Butylbenzene	ND	---	1.00	ug/L	1	06/24/19 10:48	EPA 8260C	
Carbon disulfide	ND	---	10.0	ug/L	1	06/24/19 10:48	EPA 8260C	
Carbon tetrachloride	ND	---	1.00	ug/L	1	06/24/19 10:48	EPA 8260C	
Chlorobenzene	ND	---	0.500	ug/L	1	06/24/19 10:48	EPA 8260C	
Chloroethane	ND	---	5.00	ug/L	1	06/24/19 10:48	EPA 8260C	
Chloroform	ND	---	1.00	ug/L	1	06/24/19 10:48	EPA 8260C	
Chloromethane	ND	---	5.00	ug/L	1	06/24/19 10:48	EPA 8260C	
2-Chlorotoluene	ND	---	1.00	ug/L	1	06/24/19 10:48	EPA 8260C	
4-Chlorotoluene	ND	---	1.00	ug/L	1	06/24/19 10:48	EPA 8260C	
Dibromochloromethane	ND	---	1.00	ug/L	1	06/24/19 10:48	EPA 8260C	
1,2-Dibromo-3-chloropropane	ND	---	5.00	ug/L	1	06/24/19 10:48	EPA 8260C	
1,2-Dibromoethane (EDB)	ND	---	0.500	ug/L	1	06/24/19 10:48	EPA 8260C	
Dibromomethane	ND	---	1.00	ug/L	1	06/24/19 10:48	EPA 8260C	
1,2-Dichlorobenzene	ND	---	0.500	ug/L	1	06/24/19 10:48	EPA 8260C	
1,3-Dichlorobenzene	ND	---	0.500	ug/L	1	06/24/19 10:48	EPA 8260C	
1,4-Dichlorobenzene	ND	---	0.500	ug/L	1	06/24/19 10:48	EPA 8260C	
Dichlorodifluoromethane	ND	---	1.00	ug/L	1	06/24/19 10:48	EPA 8260C	
1,1-Dichloroethane	ND	---	0.400	ug/L	1	06/24/19 10:48	EPA 8260C	
1,2-Dichloroethane (EDC)	ND	---	0.400	ug/L	1	06/24/19 10:48	EPA 8260C	
1,1-Dichloroethene	ND	---	0.400	ug/L	1	06/24/19 10:48	EPA 8260C	
cis-1,2-Dichloroethene	ND	---	0.400	ug/L	1	06/24/19 10:48	EPA 8260C	
trans-1,2-Dichloroethene	ND	---	0.400	ug/L	1	06/24/19 10:48	EPA 8260C	

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Philip Nerenberg, Lab Director

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EPA ID: OR01039

Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **Mult 802 Pump Test--2708-(**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0692 - 06 27 19 1639**

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
2708-190620-MULT802-TB (A9F0692-01)				**Matrix: Water**		**Batch: 9061200**		
1,2-Dichloropropane	ND	---	0.500	ug/L	1	06/24/19 10:48	EPA 8260C	
1,3-Dichloropropane	ND	---	1.00	ug/L	1	06/24/19 10:48	EPA 8260C	
2,2-Dichloropropane	ND	---	1.00	ug/L	1	06/24/19 10:48	EPA 8260C	
1,1-Dichloropropene	ND	---	1.00	ug/L	1	06/24/19 10:48	EPA 8260C	
cis-1,3-Dichloropropene	ND	---	1.00	ug/L	1	06/24/19 10:48	EPA 8260C	
trans-1,3-Dichloropropene	ND	---	1.00	ug/L	1	06/24/19 10:48	EPA 8260C	
Ethylbenzene	ND	---	0.500	ug/L	1	06/24/19 10:48	EPA 8260C	
Hexachlorobutadiene	ND	---	5.00	ug/L	1	06/24/19 10:48	EPA 8260C	
2-Hexanone	ND	---	10.0	ug/L	1	06/24/19 10:48	EPA 8260C	
Isopropylbenzene	ND	---	1.00	ug/L	1	06/24/19 10:48	EPA 8260C	
4-Isopropyltoluene	ND	---	1.00	ug/L	1	06/24/19 10:48	EPA 8260C	
Methylene chloride	ND	---	3.00	ug/L	1	06/24/19 10:48	EPA 8260C	
4-Methyl-2-pentanone (MiBK)	ND	---	10.0	ug/L	1	06/24/19 10:48	EPA 8260C	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	ug/L	1	06/24/19 10:48	EPA 8260C	
Naphthalene	ND	---	2.00	ug/L	1	06/24/19 10:48	EPA 8260C	
n-Propylbenzene	ND	---	0.500	ug/L	1	06/24/19 10:48	EPA 8260C	
Styrene	ND	---	1.00	ug/L	1	06/24/19 10:48	EPA 8260C	
1,1,1,2-Tetrachloroethane	ND	---	0.400	ug/L	1	06/24/19 10:48	EPA 8260C	
1,1,2,2-Tetrachloroethane	ND	---	0.500	ug/L	1	06/24/19 10:48	EPA 8260C	
Tetrachloroethene (PCE)	ND	---	0.400	ug/L	1	06/24/19 10:48	EPA 8260C	
Toluene	ND	---	1.00	ug/L	1	06/24/19 10:48	EPA 8260C	
1,2,3-Trichlorobenzene	ND	---	2.00	ug/L	1	06/24/19 10:48	EPA 8260C	
1,2,4-Trichlorobenzene	ND	---	2.00	ug/L	1	06/24/19 10:48	EPA 8260C	
1,1,1-Trichloroethane	ND	---	0.400	ug/L	1	06/24/19 10:48	EPA 8260C	
1,1,2-Trichloroethane	ND	---	0.500	ug/L	1	06/24/19 10:48	EPA 8260C	
Trichloroethene (TCE)	ND	---	0.400	ug/L	1	06/24/19 10:48	EPA 8260C	
Trichlorofluoromethane	ND	---	2.00	ug/L	1	06/24/19 10:48	EPA 8260C	
1,2,3-Trichloropropane	ND	---	1.00	ug/L	1	06/24/19 10:48	EPA 8260C	
1,2,4-Trimethylbenzene	ND	---	1.00	ug/L	1	06/24/19 10:48	EPA 8260C	
1,3,5-Trimethylbenzene	ND	---	1.00	ug/L	1	06/24/19 10:48	EPA 8260C	
Vinyl chloride	ND	---	0.400	ug/L	1	06/24/19 10:48	EPA 8260C	
m,p-Xylene	ND	---	1.00	ug/L	1	06/24/19 10:48	EPA 8260C	
o-Xylene	ND	---	0.500	ug/L	1	06/24/19 10:48	EPA 8260C	

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Philip Nerenberg, Lab Director

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EPA ID: OR01039

Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **Mult 802 Pump Test--2708-(**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0692 - 06 27 19 1639**

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
2708-190620-MULT802-TB (A9F0692-01)				**Matrix: Water**		**Batch: 9061200**		
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*102 %*	*Limits:* *80-120 %*	*1*	*06/24/19 10:48*	*EPA 8260C*	
Toluene-d8 (Surr)			*102 %*	*80-120 %*	*1*	*06/24/19 10:48*	*EPA 8260C*	
4-Bromofluorobenzene (Surr)			*101 %*	*80-120 %*	*1*	*06/24/19 10:48*	*EPA 8260C*	
2708-190620-MULT802-107 (A9F0692-02)				**Matrix: Water**		**Batch: 9061200**		
Acetone	ND	---	2000	ug/L	100	06/24/19 11:15	EPA 8260C	
Acrylonitrile	ND	---	200	ug/L	100	06/24/19 11:15	EPA 8260C	
Benzene	**4590**	---	20.0	ug/L	100	06/24/19 11:15	EPA 8260C	
Bromobenzene	ND	---	50.0	ug/L	100	06/24/19 11:15	EPA 8260C	
Bromochloromethane	ND	---	100	ug/L	100	06/24/19 11:15	EPA 8260C	
Bromodichloromethane	ND	---	100	ug/L	100	06/24/19 11:15	EPA 8260C	
Bromoform	ND	---	100	ug/L	100	06/24/19 11:15	EPA 8260C	
Bromomethane	ND	---	500	ug/L	100	06/24/19 11:15	EPA 8260C	
2-Butanone (MEK)	ND	---	1000	ug/L	100	06/24/19 11:15	EPA 8260C	
n-Butylbenzene	ND	---	100	ug/L	100	06/24/19 11:15	EPA 8260C	
sec-Butylbenzene	ND	---	100	ug/L	100	06/24/19 11:15	EPA 8260C	
tert-Butylbenzene	ND	---	100	ug/L	100	06/24/19 11:15	EPA 8260C	
Carbon disulfide	ND	---	1000	ug/L	100	06/24/19 11:15	EPA 8260C	
Carbon tetrachloride	ND	---	100	ug/L	100	06/24/19 11:15	EPA 8260C	
Chlorobenzene	ND	---	50.0	ug/L	100	06/24/19 11:15	EPA 8260C	
Chloroethane	ND	---	500	ug/L	100	06/24/19 11:15	EPA 8260C	
Chloroform	ND	---	100	ug/L	100	06/24/19 11:15	EPA 8260C	
Chloromethane	ND	---	500	ug/L	100	06/24/19 11:15	EPA 8260C	
2-Chlorotoluene	ND	---	100	ug/L	100	06/24/19 11:15	EPA 8260C	
4-Chlorotoluene	ND	---	100	ug/L	100	06/24/19 11:15	EPA 8260C	
Dibromochloromethane	ND	---	100	ug/L	100	06/24/19 11:15	EPA 8260C	
1,2-Dibromo-3-chloropropane	ND	---	500	ug/L	100	06/24/19 11:15	EPA 8260C	
1,2-Dibromoethane (EDB)	ND	---	50.0	ug/L	100	06/24/19 11:15	EPA 8260C	
Dibromomethane	ND	---	100	ug/L	100	06/24/19 11:15	EPA 8260C	
1,2-Dichlorobenzene	ND	---	50.0	ug/L	100	06/24/19 11:15	EPA 8260C	
1,3-Dichlorobenzene	ND	---	50.0	ug/L	100	06/24/19 11:15	EPA 8260C	
1,4-Dichlorobenzene	ND	---	50.0	ug/L	100	06/24/19 11:15	EPA 8260C	
Dichlorodifluoromethane	ND	---	100	ug/L	100	06/24/19 11:15	EPA 8260C	
1,1-Dichloroethane	ND	---	40.0	ug/L	100	06/24/19 11:15	EPA 8260C	

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Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **Mult 802 Pump Test--2708-(**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0692 - 06 27 19 1639**

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
2708-190620-MULT802-107 (A9F0692-02)				**Matrix: Water**		**Batch: 9061200**		
1,2-Dichloroethane (EDC)	ND	---	40.0	ug/L	100	06/24/19 11:15	EPA 8260C	
1,1-Dichloroethene	ND	---	40.0	ug/L	100	06/24/19 11:15	EPA 8260C	
cis-1,2-Dichloroethene	ND	---	40.0	ug/L	100	06/24/19 11:15	EPA 8260C	
trans-1,2-Dichloroethene	ND	---	40.0	ug/L	100	06/24/19 11:15	EPA 8260C	
1,2-Dichloropropane	ND	---	50.0	ug/L	100	06/24/19 11:15	EPA 8260C	
1,3-Dichloropropane	ND	---	100	ug/L	100	06/24/19 11:15	EPA 8260C	
2,2-Dichloropropane	ND	---	100	ug/L	100	06/24/19 11:15	EPA 8260C	
1,1-Dichloropropene	ND	---	100	ug/L	100	06/24/19 11:15	EPA 8260C	
cis-1,3-Dichloropropene	ND	---	100	ug/L	100	06/24/19 11:15	EPA 8260C	
trans-1,3-Dichloropropene	ND	---	100	ug/L	100	06/24/19 11:15	EPA 8260C	
Ethylbenzene	**79.8**	---	50.0	ug/L	100	06/24/19 11:15	EPA 8260C	
Hexachlorobutadiene	ND	---	500	ug/L	100	06/24/19 11:15	EPA 8260C	
2-Hexanone	ND	---	1000	ug/L	100	06/24/19 11:15	EPA 8260C	
Isopropylbenzene	ND	---	100	ug/L	100	06/24/19 11:15	EPA 8260C	
4-Isopropyltoluene	ND	---	100	ug/L	100	06/24/19 11:15	EPA 8260C	
Methylene chloride	ND	---	300	ug/L	100	06/24/19 11:15	EPA 8260C	
4-Methyl-2-pentanone (MiBK)	ND	---	1000	ug/L	100	06/24/19 11:15	EPA 8260C	
Methyl tert-butyl ether (MTBE)	ND	---	100	ug/L	100	06/24/19 11:15	EPA 8260C	
Naphthalene	**4320**	---	200	ug/L	100	06/24/19 11:15	EPA 8260C	
n-Propylbenzene	ND	---	50.0	ug/L	100	06/24/19 11:15	EPA 8260C	
Styrene	**108**	---	100	ug/L	100	06/24/19 11:15	EPA 8260C	
1,1,1,2-Tetrachloroethane	ND	---	40.0	ug/L	100	06/24/19 11:15	EPA 8260C	
1,1,2,2-Tetrachloroethane	ND	---	50.0	ug/L	100	06/24/19 11:15	EPA 8260C	
Tetrachloroethene (PCE)	ND	---	40.0	ug/L	100	06/24/19 11:15	EPA 8260C	
Toluene	**1120**	---	100	ug/L	100	06/24/19 11:15	EPA 8260C	
1,2,3-Trichlorobenzene	ND	---	200	ug/L	100	06/24/19 11:15	EPA 8260C	
1,2,4-Trichlorobenzene	ND	---	200	ug/L	100	06/24/19 11:15	EPA 8260C	
1,1,1-Trichloroethane	ND	---	40.0	ug/L	100	06/24/19 11:15	EPA 8260C	
1,1,2-Trichloroethane	ND	---	50.0	ug/L	100	06/24/19 11:15	EPA 8260C	
Trichloroethene (TCE)	ND	---	40.0	ug/L	100	06/24/19 11:15	EPA 8260C	
Trichlorofluoromethane	ND	---	200	ug/L	100	06/24/19 11:15	EPA 8260C	
1,2,3-Trichloropropane	ND	---	100	ug/L	100	06/24/19 11:15	EPA 8260C	
1,2,4-Trimethylbenzene	ND	---	100	ug/L	100	06/24/19 11:15	EPA 8260C	

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434 NW 6th Ave. Suite 203	Project Number: **Mult 802 Pump Test--2708-(**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0692 - 06 27 19 1639**

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
2708-190620-MULT802-107 (A9F0692-02)				**Matrix: Water**		**Batch: 9061200**		
1,3,5-Trimethylbenzene	ND	---	100	ug/L	100	06/24/19 11:15	EPA 8260C	
Vinyl chloride	ND	---	40.0	ug/L	100	06/24/19 11:15	EPA 8260C	
m,p-Xylene	**270**	---	100	ug/L	100	06/24/19 11:15	EPA 8260C	
o-Xylene	**110**	---	50.0	ug/L	100	06/24/19 11:15	EPA 8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*102 %*	*Limits: 80-120 %*	*1*	*06/24/19 11:15*	*EPA 8260C*	
Toluene-d8 (Surr)			*102 %*	*80-120 %*	*1*	*06/24/19 11:15*	*EPA 8260C*	
4-Bromofluorobenzene (Surr)			*100 %*	*80-120 %*	*1*	*06/24/19 11:15*	*EPA 8260C*	
2708-190620-MULT802-108 (A9F0692-03RE1)				**Matrix: Water**		**Batch: 9061200**		
Acetone	ND	---	200	ug/L	10	06/24/19 19:22	EPA 8260C	
Acrylonitrile	ND	---	20.0	ug/L	10	06/24/19 19:22	EPA 8260C	
Benzene	**451**	---	2.00	ug/L	10	06/24/19 19:22	EPA 8260C	
Bromobenzene	ND	---	5.00	ug/L	10	06/24/19 19:22	EPA 8260C	
Bromochloromethane	ND	---	10.0	ug/L	10	06/24/19 19:22	EPA 8260C	
Bromodichloromethane	ND	---	10.0	ug/L	10	06/24/19 19:22	EPA 8260C	
Bromoform	ND	---	10.0	ug/L	10	06/24/19 19:22	EPA 8260C	
Bromomethane	ND	---	50.0	ug/L	10	06/24/19 19:22	EPA 8260C	
2-Butanone (MEK)	ND	---	100	ug/L	10	06/24/19 19:22	EPA 8260C	
n-Butylbenzene	ND	---	10.0	ug/L	10	06/24/19 19:22	EPA 8260C	
sec-Butylbenzene	ND	---	10.0	ug/L	10	06/24/19 19:22	EPA 8260C	
tert-Butylbenzene	ND	---	10.0	ug/L	10	06/24/19 19:22	EPA 8260C	
Carbon disulfide	ND	---	100	ug/L	10	06/24/19 19:22	EPA 8260C	
Carbon tetrachloride	ND	---	10.0	ug/L	10	06/24/19 19:22	EPA 8260C	
Chlorobenzene	ND	---	5.00	ug/L	10	06/24/19 19:22	EPA 8260C	
Chloroethane	ND	---	50.0	ug/L	10	06/24/19 19:22	EPA 8260C	
Chloroform	ND	---	10.0	ug/L	10	06/24/19 19:22	EPA 8260C	
Chloromethane	ND	---	50.0	ug/L	10	06/24/19 19:22	EPA 8260C	
2-Chlorotoluene	ND	---	10.0	ug/L	10	06/24/19 19:22	EPA 8260C	
4-Chlorotoluene	ND	---	10.0	ug/L	10	06/24/19 19:22	EPA 8260C	
Dibromochloromethane	ND	---	10.0	ug/L	10	06/24/19 19:22	EPA 8260C	
1,2-Dibromo-3-chloropropane	ND	---	50.0	ug/L	10	06/24/19 19:22	EPA 8260C	
1,2-Dibromoethane (EDB)	ND	---	5.00	ug/L	10	06/24/19 19:22	EPA 8260C	
Dibromomethane	ND	---	10.0	ug/L	10	06/24/19 19:22	EPA 8260C	
1,2-Dichlorobenzene	ND	---	5.00	ug/L	10	06/24/19 19:22	EPA 8260C	

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Philip Nerenberg, Lab Director

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6700 S.W. Sandburg Street
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503-718-2323
EPA ID: OR01039

Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **Mult 802 Pump Test--2708-(**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0692 - 06 27 19 1639**

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
2708-190620-MULT802-108 (A9F0692-03RE1)				**Matrix: Water**		**Batch: 9061200**		
1,3-Dichlorobenzene	ND	---	5.00	ug/L	10	06/24/19 19:22	EPA 8260C	
1,4-Dichlorobenzene	ND	---	5.00	ug/L	10	06/24/19 19:22	EPA 8260C	
Dichlorodifluoromethane	ND	---	10.0	ug/L	10	06/24/19 19:22	EPA 8260C	
1,1-Dichloroethane	ND	---	4.00	ug/L	10	06/24/19 19:22	EPA 8260C	
1,2-Dichloroethane (EDC)	ND	---	4.00	ug/L	10	06/24/19 19:22	EPA 8260C	
1,1-Dichloroethene	ND	---	4.00	ug/L	10	06/24/19 19:22	EPA 8260C	
cis-1,2-Dichloroethene	ND	---	4.00	ug/L	10	06/24/19 19:22	EPA 8260C	
trans-1,2-Dichloroethene	ND	---	4.00	ug/L	10	06/24/19 19:22	EPA 8260C	
1,2-Dichloropropane	ND	---	5.00	ug/L	10	06/24/19 19:22	EPA 8260C	
1,3-Dichloropropane	ND	---	10.0	ug/L	10	06/24/19 19:22	EPA 8260C	
2,2-Dichloropropane	ND	---	10.0	ug/L	10	06/24/19 19:22	EPA 8260C	
1,1-Dichloropropene	ND	---	10.0	ug/L	10	06/24/19 19:22	EPA 8260C	
cis-1,3-Dichloropropene	ND	---	10.0	ug/L	10	06/24/19 19:22	EPA 8260C	
trans-1,3-Dichloropropene	ND	---	10.0	ug/L	10	06/24/19 19:22	EPA 8260C	
Ethylbenzene	**21.9**	---	5.00	ug/L	10	06/24/19 19:22	EPA 8260C	
Hexachlorobutadiene	ND	---	50.0	ug/L	10	06/24/19 19:22	EPA 8260C	
2-Hexanone	ND	---	100	ug/L	10	06/24/19 19:22	EPA 8260C	
Isopropylbenzene	ND	---	10.0	ug/L	10	06/24/19 19:22	EPA 8260C	
4-Isopropyltoluene	ND	---	10.0	ug/L	10	06/24/19 19:22	EPA 8260C	
Methylene chloride	ND	---	30.0	ug/L	10	06/24/19 19:22	EPA 8260C	
4-Methyl-2-pentanone (MiBK)	ND	---	100	ug/L	10	06/24/19 19:22	EPA 8260C	
Methyl tert-butyl ether (MTBE)	ND	---	10.0	ug/L	10	06/24/19 19:22	EPA 8260C	
Naphthalene	**1320**	---	20.0	ug/L	10	06/24/19 19:22	EPA 8260C	
n-Propylbenzene	ND	---	5.00	ug/L	10	06/24/19 19:22	EPA 8260C	
Styrene	**14.6**	---	10.0	ug/L	10	06/24/19 19:22	EPA 8260C	
1,1,1,2-Tetrachloroethane	ND	---	4.00	ug/L	10	06/24/19 19:22	EPA 8260C	
1,1,2,2-Tetrachloroethane	ND	---	5.00	ug/L	10	06/24/19 19:22	EPA 8260C	
Tetrachloroethene (PCE)	ND	---	4.00	ug/L	10	06/24/19 19:22	EPA 8260C	
Toluene	**127**	---	10.0	ug/L	10	06/24/19 19:22	EPA 8260C	
1,2,3-Trichlorobenzene	ND	---	20.0	ug/L	10	06/24/19 19:22	EPA 8260C	
1,2,4-Trichlorobenzene	ND	---	20.0	ug/L	10	06/24/19 19:22	EPA 8260C	
1,1,1-Trichloroethane	ND	---	4.00	ug/L	10	06/24/19 19:22	EPA 8260C	
1,1,2-Trichloroethane	ND	---	5.00	ug/L	10	06/24/19 19:22	EPA 8260C	

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Philip Nerenberg, Lab Director

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503-718-2323
EPA ID: OR01039

Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **Mult 802 Pump Test--2708-(**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0692 - 06 27 19 1639**

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
2708-190620-MULT802-108 (A9F0692-03RE1)				**Matrix: Water**		**Batch: 9061200**		
Trichloroethene (TCE)	ND	---	4.00	ug/L	10	06/24/19 19:22	EPA 8260C	
Trichlorofluoromethane	ND	---	20.0	ug/L	10	06/24/19 19:22	EPA 8260C	
1,2,3-Trichloropropane	ND	---	10.0	ug/L	10	06/24/19 19:22	EPA 8260C	
1,2,4-Trimethylbenzene	**12.7**	---	10.0	ug/L	10	06/24/19 19:22	EPA 8260C	
1,3,5-Trimethylbenzene	ND	---	10.0	ug/L	10	06/24/19 19:22	EPA 8260C	
Vinyl chloride	ND	---	4.00	ug/L	10	06/24/19 19:22	EPA 8260C	
m,p-Xylene	**45.5**	---	10.0	ug/L	10	06/24/19 19:22	EPA 8260C	
o-Xylene	**18.2**	---	5.00	ug/L	10	06/24/19 19:22	EPA 8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*101 %*	*Limits: 80-120 %*	*1*	*06/24/19 19:22*	*EPA 8260C*	
Toluene-d8 (Surr)			*101 %*	*80-120 %*	*1*	*06/24/19 19:22*	*EPA 8260C*	
4-Bromofluorobenzene (Surr)			*97 %*	*80-120 %*	*1*	*06/24/19 19:22*	*EPA 8260C*	

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Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **Mult 802 Pump Test--2708-(**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0692 - 06 27 19 1639**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9061200 - EPA 5030B							**Water**					
Blank (9061200-BLK1)			Prepared: 06/24/19 08:27 Analyzed: 06/24/19 10:21									
EPA 8260C												
Acetone	ND	---	20.0	ug/L	1	---	---	---	---	---	---	
Acrylonitrile	ND	---	2.00	ug/L	1	---	---	---	---	---	---	
Benzene	ND	---	0.200	ug/L	1	---	---	---	---	---	---	
Bromobenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Bromochloromethane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Bromodichloromethane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Bromoform	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Bromomethane	ND	---	5.00	ug/L	1	---	---	---	---	---	---	
2-Butanone (MEK)	ND	---	10.0	ug/L	1	---	---	---	---	---	---	
n-Butylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
sec-Butylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
tert-Butylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Carbon disulfide	ND	---	10.0	ug/L	1	---	---	---	---	---	---	
Carbon tetrachloride	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Chlorobenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Chloroethane	ND	---	5.00	ug/L	1	---	---	---	---	---	---	
Chloroform	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Chloromethane	ND	---	5.00	ug/L	1	---	---	---	---	---	---	
2-Chlorotoluene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
4-Chlorotoluene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Dibromochloromethane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	---	5.00	ug/L	1	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Dibromomethane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
1,1-Dichloroethane	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
1,1-Dichloroethene	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	---	0.400	ug/L	1	---	---	---	---	---	---	

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Philip Nerenberg, Lab Director

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503-718-2323
EPA ID: OR01039

Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **Mult 802 Pump Test--2708-(**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0692 - 06 27 19 1639**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9061200 - EPA 5030B							**Water**					
Blank (9061200-BLK1)			Prepared: 06/24/19 08:27		Analyzed: 06/24/19 10:21							
1,2-Dichloropropane	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
1,3-Dichloropropane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
2,2-Dichloropropane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
1,1-Dichloropropene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Ethylbenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Hexachlorobutadiene	ND	---	5.00	ug/L	1	---	---	---	---	---	---	
2-Hexanone	ND	---	10.0	ug/L	1	---	---	---	---	---	---	
Isopropylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
4-Isopropyltoluene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Methylene chloride	ND	---	3.00	ug/L	1	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	---	10.0	ug/L	1	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Naphthalene	ND	---	2.00	ug/L	1	---	---	---	---	---	---	
n-Propylbenzene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Styrene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
Toluene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	---	2.00	ug/L	1	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	---	2.00	ug/L	1	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	---	0.500	ug/L	1	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
Trichlorofluoromethane	ND	---	2.00	ug/L	1	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
Vinyl chloride	ND	---	0.400	ug/L	1	---	---	---	---	---	---	
m,p-Xylene	ND	---	1.00	ug/L	1	---	---	---	---	---	---	
o-Xylene	ND	---	0.500	ug/L	1	---	---	---	---	---	---	

Surr: 1,4-Difluorobenzene (Surr) *Recovery: 101 %* *Limits: 80-120 %* *Dilution: 1x*

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Philip Nerenberg, Lab Director

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Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **Mult 802 Pump Test--2708-(**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0692 - 06 27 19 1639**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9061200 - EPA 5030B							**Water**					
Blank (9061200-BLK1)			Prepared: 06/24/19 08:27 Analyzed: 06/24/19 10:21									
Surr: Toluene-d8 (Surr)			*Recovery: 101 %*	*Limits: 80-120 %*			*Dilution: 1x*					
4-Bromofluorobenzene (Surr)			*100 %*	*80-120 %*			*"*					
LCS (9061200-BS1)			Prepared: 06/24/19 08:27 Analyzed: 06/24/19 09:27									
EPA 8260C												
Acetone	40.7	---	20.0	ug/L	1	40.0	---	102	80-120%	---	---	
Acrylonitrile	21.8	---	2.00	ug/L	1	20.0	---	109	80-120%	---	---	
Benzene	20.2	---	0.200	ug/L	1	20.0	---	101	80-120%	---	---	
Bromobenzene	19.8	---	0.500	ug/L	1	20.0	---	99	80-120%	---	---	
Bromochloromethane	21.4	---	1.00	ug/L	1	20.0	---	107	80-120%	---	---	
Bromodichloromethane	21.5	---	1.00	ug/L	1	20.0	---	108	80-120%	---	---	
Bromoform	22.2	---	1.00	ug/L	1	20.0	---	111	80-120%	---	---	
Bromomethane	18.6	---	5.00	ug/L	1	20.0	---	93	80-120%	---	---	
2-Butanone (MEK)	42.9	---	10.0	ug/L	1	40.0	---	107	80-120%	---	---	
n-Butylbenzene	20.2	---	1.00	ug/L	1	20.0	---	101	80-120%	---	---	
sec-Butylbenzene	19.7	---	1.00	ug/L	1	20.0	---	99	80-120%	---	---	
tert-Butylbenzene	20.0	---	1.00	ug/L	1	20.0	---	100	80-120%	---	---	
Carbon disulfide	19.8	---	10.0	ug/L	1	20.0	---	99	80-120%	---	---	
Carbon tetrachloride	21.4	---	1.00	ug/L	1	20.0	---	107	80-120%	---	---	
Chlorobenzene	20.3	---	0.500	ug/L	1	20.0	---	102	80-120%	---	---	
Chloroethane	19.3	---	5.00	ug/L	1	20.0	---	96	80-120%	---	---	
Chloroform	20.7	---	1.00	ug/L	1	20.0	---	103	80-120%	---	---	
Chloromethane	18.9	---	5.00	ug/L	1	20.0	---	95	80-120%	---	---	
2-Chlorotoluene	19.6	---	1.00	ug/L	1	20.0	---	98	80-120%	---	---	
4-Chlorotoluene	19.8	---	1.00	ug/L	1	20.0	---	99	80-120%	---	---	
Dibromochloromethane	21.8	---	1.00	ug/L	1	20.0	---	109	80-120%	---	---	
1,2-Dibromo-3-chloropropane	21.1	---	5.00	ug/L	1	20.0	---	106	80-120%	---	---	
1,2-Dibromoethane (EDB)	21.2	---	0.500	ug/L	1	20.0	---	106	80-120%	---	---	
Dibromomethane	21.4	---	1.00	ug/L	1	20.0	---	107	80-120%	---	---	
1,2-Dichlorobenzene	20.4	---	0.500	ug/L	1	20.0	---	102	80-120%	---	---	
1,3-Dichlorobenzene	19.9	---	0.500	ug/L	1	20.0	---	100	80-120%	---	---	
1,4-Dichlorobenzene	19.8	---	0.500	ug/L	1	20.0	---	99	80-120%	---	---	
Dichlorodifluoromethane	20.6	---	1.00	ug/L	1	20.0	---	103	80-120%	---	---	
1,1-Dichloroethane	21.1	---	0.400	ug/L	1	20.0	---	106	80-120%	---	---	

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Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0692 - 06 27 19 1639**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9061200 - EPA 5030B							**Water**					
LCS (9061200-BS1)			Prepared: 06/24/19 08:27		Analyzed: 06/24/19 09:27							
1,2-Dichloroethane (EDC)	21.1	---	0.400	ug/L	1	20.0	---	105	80-120%	---	---	
1,1-Dichloroethene	21.2	---	0.400	ug/L	1	20.0	---	106	80-120%	---	---	
cis-1,2-Dichloroethene	21.2	---	0.400	ug/L	1	20.0	---	106	80-120%	---	---	
trans-1,2-Dichloroethene	20.7	---	0.400	ug/L	1	20.0	---	104	80-120%	---	---	
1,2-Dichloropropane	21.0	---	0.500	ug/L	1	20.0	---	105	80-120%	---	---	
1,3-Dichloropropane	20.7	---	1.00	ug/L	1	20.0	---	104	80-120%	---	---	
2,2-Dichloropropane	21.5	---	1.00	ug/L	1	20.0	---	107	80-120%	---	---	
1,1-Dichloropropene	20.6	---	1.00	ug/L	1	20.0	---	103	80-120%	---	---	
cis-1,3-Dichloropropene	20.7	---	1.00	ug/L	1	20.0	---	103	80-120%	---	---	
trans-1,3-Dichloropropene	21.4	---	1.00	ug/L	1	20.0	---	107	80-120%	---	---	
Ethylbenzene	20.2	---	0.500	ug/L	1	20.0	---	101	80-120%	---	---	
Hexachlorobutadiene	20.6	---	5.00	ug/L	1	20.0	---	103	80-120%	---	---	
2-Hexanone	42.0	---	10.0	ug/L	1	40.0	---	105	80-120%	---	---	
Isopropylbenzene	20.5	---	1.00	ug/L	1	20.0	---	102	80-120%	---	---	
4-Isopropyltoluene	20.7	---	1.00	ug/L	1	20.0	---	103	80-120%	---	---	
Methylene chloride	20.0	---	3.00	ug/L	1	20.0	---	100	80-120%	---	---	
4-Methyl-2-pentanone (MiBK)	42.6	---	10.0	ug/L	1	40.0	---	106	80-120%	---	---	
Methyl tert-butyl ether (MTBE)	20.4	---	1.00	ug/L	1	20.0	---	102	80-120%	---	---	
Naphthalene	20.4	---	2.00	ug/L	1	20.0	---	102	80-120%	---	---	
n-Propylbenzene	19.6	---	0.500	ug/L	1	20.0	---	98	80-120%	---	---	
Styrene	20.9	---	1.00	ug/L	1	20.0	---	104	80-120%	---	---	
1,1,1,2-Tetrachloroethane	22.1	---	0.400	ug/L	1	20.0	---	111	80-120%	---	---	
1,1,2,2-Tetrachloroethane	20.8	---	0.500	ug/L	1	20.0	---	104	80-120%	---	---	
Tetrachloroethene (PCE)	19.7	---	0.400	ug/L	1	20.0	---	98	80-120%	---	---	
Toluene	19.5	---	1.00	ug/L	1	20.0	---	97	80-120%	---	---	
1,2,3-Trichlorobenzene	20.6	---	2.00	ug/L	1	20.0	---	103	80-120%	---	---	
1,2,4-Trichlorobenzene	20.6	---	2.00	ug/L	1	20.0	---	103	80-120%	---	---	
1,1,1-Trichloroethane	21.2	---	0.400	ug/L	1	20.0	---	106	80-120%	---	---	
1,1,2-Trichloroethane	20.8	---	0.500	ug/L	1	20.0	---	104	80-120%	---	---	
Trichloroethene (TCE)	20.5	---	0.400	ug/L	1	20.0	---	102	80-120%	---	---	
Trichlorofluoromethane	20.8	---	2.00	ug/L	1	20.0	---	104	80-120%	---	---	
1,2,3-Trichloropropane	21.1	---	1.00	ug/L	1	20.0	---	106	80-120%	---	---	
1,2,4-Trimethylbenzene	20.4	---	1.00	ug/L	1	20.0	---	102	80-120%	---	---	
1,3,5-Trimethylbenzene	19.9	---	1.00	ug/L	1	20.0	---	100	80-120%	---	---	

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EPA ID: OR01039

Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **Mult 802 Pump Test--2708-(**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0692 - 06 27 19 1639**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9061200 - EPA 5030B							**Water**					
LCS (9061200-BS1)			Prepared: 06/24/19 08:27 Analyzed: 06/24/19 09:27									
Vinyl chloride	20.7	---	0.400	ug/L	1	20.0	---	104	80-120%	---	---	
m,p-Xylene	40.6	---	1.00	ug/L	1	40.0	---	101	80-120%	---	---	
o-Xylene	20.4	---	0.500	ug/L	1	20.0	---	102	80-120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		*Recovery: 101 %*		*Limits: 80-120 %*			*Dilution: 1x*					
Toluene-d8 (Surr)		*100 %*		*80-120 %*			*"*					
4-Bromofluorobenzene (Surr)		*97 %*		*80-120 %*			*"*					
Duplicate (9061200-DUP1)			Prepared: 06/24/19 10:27 Analyzed: 06/24/19 15:19									
QC Source Sample: Non-SDG (A9F0709-01)												
Acetone	ND	---	20.0	ug/L	1	---	ND	---	---	---	30%	
Acrylonitrile	ND	---	2.00	ug/L	1	---	ND	---	---	---	30%	
Benzene	ND	---	0.200	ug/L	1	---	ND	---	---	---	30%	
Bromobenzene	ND	---	0.500	ug/L	1	---	ND	---	---	---	30%	
Bromochloromethane	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
Bromodichloromethane	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
Bromoform	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
Bromomethane	ND	---	5.00	ug/L	1	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	---	10.0	ug/L	1	---	ND	---	---	---	30%	
n-Butylbenzene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
Carbon disulfide	ND	---	10.0	ug/L	1	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
Chlorobenzene	ND	---	0.500	ug/L	1	---	ND	---	---	---	30%	
Chloroethane	ND	---	5.00	ug/L	1	---	ND	---	---	---	30%	
Chloroform	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
Chloromethane	ND	---	5.00	ug/L	1	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
Dibromochloromethane	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	---	5.00	ug/L	1	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	---	0.500	ug/L	1	---	ND	---	---	---	30%	
Dibromomethane	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	---	0.500	ug/L	1	---	ND	---	---	---	30%	

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Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **Mult 802 Pump Test--2708-(**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0692 - 06 27 19 1639**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9061200 - EPA 5030B							**Water**					
Duplicate (9061200-DUP1)			Prepared: 06/24/19 10:27 Analyzed: 06/24/19 15:19									
QC Source Sample: Non-SDG (A9F0709-01)												
1,3-Dichlorobenzene	ND	---	0.500	ug/L	1	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	---	0.500	ug/L	1	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
1,1-Dichloroethane	**1.49**	---	0.400	ug/L	1	---	1.48	---	---	0.4	30%	
1,2-Dichloroethane (EDC)	ND	---	0.400	ug/L	1	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	---	0.400	ug/L	1	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	---	0.400	ug/L	1	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	---	0.400	ug/L	1	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	---	0.500	ug/L	1	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
Ethylbenzene	ND	---	0.500	ug/L	1	---	ND	---	---	---	30%	
Hexachlorobutadiene	ND	---	5.00	ug/L	1	---	ND	---	---	---	30%	
2-Hexanone	ND	---	10.0	ug/L	1	---	ND	---	---	---	30%	
Isopropylbenzene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
Methylene chloride	ND	---	3.00	ug/L	1	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	---	10.0	ug/L	1	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
Naphthalene	ND	---	2.00	ug/L	1	---	ND	---	---	---	30%	
n-Propylbenzene	ND	---	0.500	ug/L	1	---	ND	---	---	---	30%	
Styrene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	---	0.400	ug/L	1	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	---	0.500	ug/L	1	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	ND	---	0.400	ug/L	1	---	ND	---	---	---	30%	
Toluene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	---	2.00	ug/L	1	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	---	2.00	ug/L	1	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	---	0.400	ug/L	1	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	---	0.500	ug/L	1	---	ND	---	---	---	30%	

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434 NW 6th Ave. Suite 203	Project Number: **Mult 802 Pump Test--2708-(**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0692 - 06 27 19 1639**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9061200 - EPA 5030B							**Water**					
Duplicate (9061200-DUP1)			Prepared: 06/24/19 10:27 Analyzed: 06/24/19 15:19									
QC Source Sample: Non-SDG (A9F0709-01)												
Trichloroethene (TCE)	ND	---	0.400	ug/L	1	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	---	2.00	ug/L	1	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
1,3,5-Trimethylbenzene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
Vinyl chloride	ND	---	0.400	ug/L	1	---	ND	---	---	---	30%	
m,p-Xylene	ND	---	1.00	ug/L	1	---	ND	---	---	---	30%	
o-Xylene	ND	---	0.500	ug/L	1	---	ND	---	---	---	30%	
Surr: 1,4-Difluorobenzene (Surr)		*Recovery:*	*101 %*	*Limits:*	*80-120 %*		*Dilution: 1x*					
Toluene-d8 (Surr)			*100 %*		*80-120 %*		*"*					
4-Bromofluorobenzene (Surr)			*102 %*		*80-120 %*		*"*					
Matrix Spike (9061200-MS1)			Prepared: 06/24/19 10:27 Analyzed: 06/24/19 20:43									
QC Source Sample: Non-SDG (A9F0709-12)												
EPA 8260C												
Acetone	52.4	---	20.0	ug/L	1	40.0	ND	131	39-160%	---	---	
Acrylonitrile	24.6	---	2.00	ug/L	1	20.0	ND	123	63-135%	---	---	
Benzene	22.8	---	0.200	ug/L	1	20.0	ND	114	79-120%	---	---	
Bromobenzene	21.9	---	0.500	ug/L	1	20.0	ND	109	80-120%	---	---	
Bromochloromethane	23.8	---	1.00	ug/L	1	20.0	ND	119	78-123%	---	---	
Bromodichloromethane	24.3	---	1.00	ug/L	1	20.0	ND	121	79-125%	---	---	
Bromoform	23.2	---	1.00	ug/L	1	20.0	ND	116	66-130%	---	---	
Bromomethane	16.1	---	5.00	ug/L	1	20.0	ND	80	53-141%	---	---	
2-Butanone (MEK)	48.5	---	10.0	ug/L	1	40.0	ND	121	56-143%	---	---	
n-Butylbenzene	23.6	---	1.00	ug/L	1	20.0	ND	118	75-128%	---	---	
sec-Butylbenzene	22.6	---	1.00	ug/L	1	20.0	ND	113	77-126%	---	---	
tert-Butylbenzene	22.7	---	1.00	ug/L	1	20.0	ND	113	78-124%	---	---	
Carbon disulfide	23.2	---	10.0	ug/L	1	20.0	ND	116	64-133%	---	---	
Carbon tetrachloride	24.2	---	1.00	ug/L	1	20.0	ND	121	72-136%	---	---	
Chlorobenzene	22.0	---	0.500	ug/L	1	20.0	ND	110	80-120%	---	---	
Chloroethane	28.9	---	5.00	ug/L	1	20.0	ND	**144**	**60-138%**	---	---	Q-01
Chloroform	23.7	---	1.00	ug/L	1	20.0	ND	118	79-124%	---	---	
Chloromethane	20.8	---	5.00	ug/L	1	20.0	ND	104	50-139%	---	---	

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434 NW 6th Ave. Suite 203	Project Number: **Mult 802 Pump Test--2708-(**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0692 - 06 27 19 1639**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9061200 - EPA 5030B							**Water**					
Matrix Spike (9061200-MS1)			Prepared: 06/24/19 10:27		Analyzed: 06/24/19 20:43							
QC Source Sample: Non-SDG (A9F0709-12)												
2-Chlorotoluene	21.9	---	1.00	ug/L	1	20.0	ND	109	79-122%	---	---	
4-Chlorotoluene	22.4	---	1.00	ug/L	1	20.0	ND	112	78-122%	---	---	
Dibromochloromethane	23.1	---	1.00	ug/L	1	20.0	ND	115	74-126%	---	---	
1,2-Dibromo-3-chloropropane	21.7	---	5.00	ug/L	1	20.0	ND	109	62-128%	---	---	
1,2-Dibromoethane (EDB)	22.9	---	0.500	ug/L	1	20.0	ND	114	77-121%	---	---	
Dibromomethane	23.9	---	1.00	ug/L	1	20.0	ND	119	79-123%	---	---	
1,2-Dichlorobenzene	22.1	---	0.500	ug/L	1	20.0	ND	111	80-120%	---	---	
1,3-Dichlorobenzene	22.2	---	0.500	ug/L	1	20.0	ND	111	80-120%	---	---	
1,4-Dichlorobenzene	21.8	---	0.500	ug/L	1	20.0	ND	109	79-120%	---	---	
Dichlorodifluoromethane	23.0	---	1.00	ug/L	1	20.0	ND	115	32-152%	---	---	
1,1-Dichloroethane	24.8	---	0.400	ug/L	1	20.0	0.536	121	77-125%	---	---	
1,2-Dichloroethane (EDC)	24.9	---	0.400	ug/L	1	20.0	ND	124	73-128%	---	---	
1,1-Dichloroethene	25.5	---	0.400	ug/L	1	20.0	ND	128	71-131%	---	---	
cis-1,2-Dichloroethene	24.1	---	0.400	ug/L	1	20.0	ND	121	78-123%	---	---	
trans-1,2-Dichloroethene	24.3	---	0.400	ug/L	1	20.0	ND	122	75-124%	---	---	
1,2-Dichloropropane	23.7	---	0.500	ug/L	1	20.0	ND	119	78-122%	---	---	
1,3-Dichloropropane	22.6	---	1.00	ug/L	1	20.0	ND	113	80-120%	---	---	
2,2-Dichloropropane	20.5	---	1.00	ug/L	1	20.0	ND	103	60-139%	---	---	
1,1-Dichloropropene	23.7	---	1.00	ug/L	1	20.0	ND	119	79-125%	---	---	
cis-1,3-Dichloropropene	20.8	---	1.00	ug/L	1	20.0	ND	104	75-124%	---	---	
trans-1,3-Dichloropropene	21.5	---	1.00	ug/L	1	20.0	ND	108	73-127%	---	---	
Ethylbenzene	22.5	---	0.500	ug/L	1	20.0	ND	113	79-121%	---	---	
Hexachlorobutadiene	21.6	---	5.00	ug/L	1	20.0	ND	108	66-134%	---	---	
2-Hexanone	46.7	---	10.0	ug/L	1	40.0	ND	117	57-139%	---	---	
Isopropylbenzene	22.5	---	1.00	ug/L	1	20.0	ND	112	72-131%	---	---	
4-Isopropyltoluene	22.9	---	1.00	ug/L	1	20.0	ND	115	77-127%	---	---	
Methylene chloride	21.6	---	3.00	ug/L	1	20.0	ND	108	74-124%	---	---	
4-Methyl-2-pentanone (MiBK)	47.6	---	10.0	ug/L	1	40.0	ND	119	67-130%	---	---	
Methyl tert-butyl ether (MTBE)	22.0	---	1.00	ug/L	1	20.0	ND	110	71-124%	---	---	
Naphthalene	22.0	---	2.00	ug/L	1	20.0	ND	110	61-128%	---	---	
n-Propylbenzene	22.8	---	0.500	ug/L	1	20.0	ND	114	76-126%	---	---	
Styrene	22.4	---	1.00	ug/L	1	20.0	ND	112	78-123%	---	---	
1,1,1,2-Tetrachloroethane	23.5	---	0.400	ug/L	1	20.0	ND	117	78-124%	---	---	

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QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9061200 - EPA 5030B							**Water**					
Matrix Spike (9061200-MS1)			Prepared: 06/24/19 10:27		Analyzed: 06/24/19 20:43							
QC Source Sample: Non-SDG (A9F0709-12)												
1,1,2,2-Tetrachloroethane	24.1	---	0.500	ug/L	1	20.0	ND	120	71-121%	---	---	
Tetrachloroethene (PCE)	22.1	---	0.400	ug/L	1	20.0	ND	111	74-129%	---	---	
Toluene	21.6	---	1.00	ug/L	1	20.0	ND	108	80-121%	---	---	
1,2,3-Trichlorobenzene	22.5	---	2.00	ug/L	1	20.0	ND	112	69-129%	---	---	
1,2,4-Trichlorobenzene	22.4	---	2.00	ug/L	1	20.0	ND	112	69-130%	---	---	
1,1,1-Trichloroethane	24.0	---	0.400	ug/L	1	20.0	ND	120	74-131%	---	---	
1,1,2-Trichloroethane	22.6	---	0.500	ug/L	1	20.0	ND	113	80-120%	---	---	
Trichloroethene (TCE)	23.1	---	0.400	ug/L	1	20.0	0.789	111	79-123%	---	---	
Trichlorofluoromethane	27.2	---	2.00	ug/L	1	20.0	ND	136	65-141%	---	---	
1,2,3-Trichloropropane	23.6	---	1.00	ug/L	1	20.0	ND	118	73-122%	---	---	
1,2,4-Trimethylbenzene	22.9	---	1.00	ug/L	1	20.0	ND	114	76-124%	---	---	
1,3,5-Trimethylbenzene	22.4	---	1.00	ug/L	1	20.0	ND	112	75-124%	---	---	
Vinyl chloride	23.9	---	0.400	ug/L	1	20.0	ND	120	58-137%	---	---	
m,p-Xylene	44.8	---	1.00	ug/L	1	40.0	ND	112	80-121%	---	---	
o-Xylene	22.3	---	0.500	ug/L	1	20.0	ND	111	78-122%	---	---	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 103 %*		*Limits: 80-120 %*			*Dilution: 1x*				
Toluene-d8 (Surr)			*100 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*98 %*		*80-120 %*			*"*				

Apex Laboratories

Philip Nerenberg, Lab Director

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Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
EPA ID: OR01039

Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **Mult 802 Pump Test--2708-(**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0692 - 06 27 19 1639**

SAMPLE PREPARATION INFORMATION

Volatile Organic Compounds by EPA 8260C

Prep: EPA 5030B

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 9061200							
A9F0692-01	Water	EPA 8260C	06/20/19 14:00	06/24/19 10:27	5mL/5mL	5mL/5mL	1.00
A9F0692-02	Water	EPA 8260C	06/20/19 14:30	06/24/19 10:27	5mL/5mL	5mL/5mL	1.00
A9F0692-03RE1	Water	EPA 8260C	06/20/19 16:10	06/24/19 10:27	5mL/5mL	5mL/5mL	1.00

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QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

Apex Laboratories

Q-01 Spike recovery and/or RPD is outside acceptance limits.

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Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0692 - 06 27 19 1639**

REPORTING NOTES AND CONVENTIONS:

Abbreviations:

DET Analyte DETECTED at or above the detection or reporting limit.

ND Analyte NOT DETECTED at or above the detection or reporting limit.

NR Result Not Reported

RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as " dry", " wet", or " " (blank) designation.

" dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.

" wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.

" " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

" --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.

" *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).
-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
For further details, please request a copy of this document.

Apex Laboratories

Philip Nerenberg, Lab Director

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Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **Mult 802 Pump Test--2708-(**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0692 - 06 27 19 1639**

REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

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Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **Mult 802 Pump Test--2708-(**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0692 - 06 27 19 1639**

LABORATORY ACCREDITATION INFORMATION

TNI Certification ID: OR100062 (Primary Accreditation) - EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Accreditation
All reported analytes are included in Apex Laboratories' current ORELAP scope.					

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation.
Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provded by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

Apex Laboratories

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Apex Laboratories, LLC

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434 NW 6th Ave. Suite 203	Project Number: **Mult 802 Pump Test--2708-(**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0692 - 06 27 19 1639**

A9F0692

HAHN AND ASSOCIATES, INC.
Environmental Consultants
434 NW Sixth Avenue, Suite 203 • Portland OR 97209
(503) 796-0717 • Fax (503) 227-2209

CHAIN OF CUSTODY

Laboratory: Apex Labs, Tigard, Oregon
Lab Project No.:
Chain of Custody No. 1

Project Manager: Rob Ede
Project No.: 2708-60F
Project Name: Mult 802 Pump Test
Collected by: AJB / RBE

Liquid with Sediment Sample — Test Filtrate ____ Test Sediment ____ Test Both
Multi-Phase Sample — Test One (which) ____ Test Separately ____ Shake

Samples Received at 4C (Y or N)
Appropriate Containers Used (Y or N)
Provide Verbal Results (Y or N) No
Provide Preliminary Fax Results Yes

Sample Number Prefix: 2708-190620-MULT802-

Lab ID	Sample #	Date	Time	Sample Description	Matrix: Soil	Water	Air	Other	Number of Containers	Analyses to be Performed: VOCs by EPA Method 8260C	SVOCs (Low Level) by EPA Method 8270D Full List	NWTPH-Dx	NWTPH-Gx	Gasco Metals by EPA 6000/7000 Series	Total Cyanide (EPA 335.4)	Free Cyanide ASTM D4282-02 (microdiffusion)-Extract in 48 hrs	Available Cyanide OIA-1677	RUSH	Remarks
	TB	20-Jun-19	2:00						1	X									
	-107	20-Jun-19	14:30	0 gallons					10	X								X	2 Day TAT
	-108	20-Jun-19	16:10	10,000 gallons					10	X								X	2 Day TAT

Relinquished by: Hahn and Associates, Inc. — Date 6-21-19 — Time 1137 — Received by: Apex Labs — Company — Date 6/21/19
Relinquished by: ____ — Company — Date — Time — Received by: ____ — Company — Date — Time
Relinquished by: ____ — Company — Date — Time — Received by: ____ — Company — Date — Time

Apex Laboratories

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Philip Nerenberg

Philip Nerenberg, Lab Director

Apex Laboratories, LLC
6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
EPA ID: OR01039

Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **Mult 802 Pump Test--2708-(**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0692 - 06 27 19 1639**

APEX LABS COOLER RECEIPT FORM

Client: Hahn Element WO#: A9 F0692

Project/Project #: Mult 802 Pump Test 2708-60F

Delivery Info:

Date/time received: 6/21/19 @ 1137 By: CFH

Delivered by: Apex X Client ___ ESS ___ FedEx ___ UPS ___ Swift ___ Senvoy ___ SDS ___ Other ___

Cooler Inspection Date/time inspected: 6/21/19 @ 1213 By: CFH

Chain of Custody included? Yes X No ___ Custody seals? Yes X No ___

Signed/dated by client? Yes X No ___

Signed/dated by Apex? Yes X No ___

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	0.6						
Received on ice? (Y/N)	Y						
Temp. blanks? (Y/N)	Y						
Ice type: (Gel/Real/Other)	Gel						
Condition:	Good						

Cooler out of temp? (Y/(N)) Possible reason why: ___

If some coolers are in temp and some out, were green dots applied to out of temperature samples? Yes/No/(NA)

Out of temperature samples form initiated? Yes/No/(NA)

Samples Inspection: Date/time inspected: 6/21/19 @ 1300 By: CB

All samples intact? Yes X No ___ Comments: ___

Bottle labels/COCs agree? Yes X No ___ Comments: ½ 1 L Unp. amkrs Arr -107 received empty, No time on cont.

COC/container discrepancies form initiated? Yes ___ No ___ NA X

Containers/volumes received appropriate for analysis? Yes X No ___ Comments: ___

Do VOA vials have visible headspace? Yes ___ No X NA ___

Comments ___

Water samples: pH checked: Yes X No ___ NA ___ pH appropriate? Yes ___ No ___ NA ___

Comments: ___

Additional information: TB # 1876

Labeled by: CB Witness: AOC Cooler Inspected by: CB See Project Contact Form: Y

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Sample Receipt Documentation
(Work orders, Chain of Custody & Cooler Receipt Forms)

A9F0692

Apex Laboratories

Client: Hahn and Associates
Project: Mult 802 Decommissioning
Project Manager: Philip Nerenberg
Project Number: Mult 802 Pump Test--2708-60F

Report To:
Hahn and Associates
Rob Ede
434 NW 6th Ave. Suite 203
Portland, OR 97209
Phone: (503) 796-0717
Fax: (503) 227-2209

Invoice To:
Hahn and Associates
Rob Ede
434 NW 6th Ave. Suite 203
Portland, OR 97209
Phone :(503) 796-0717
Fax: (503) 227-2209

Date Due: 06/25/19 17:00 (2 day TAT)
Received By: Charles F. Hoffman
Date Received: 06/21/19 11:37
Logged In By: Cameron L O'Brien
Date Logged In: 06/21/19 13:06

Cooler #1 received at 0.6°C

Custody Seals	Yes	Containers Intact	Yes	COC/Labels Agree	Yes	PH Confirmed	Yes	Received On Ice	Yes
Temperature OK	Yes								

Analysis	Due	TAT	Expires	Comments
A9F0692-01 2708-190620-MULT802-TB [Water] Sampled 06/20/19 14:00 (GMT-08:00) Pacific Time (US & Canada) 1 Containers				**TB #1876**
Project Mgmt				
Data Package	08/23/19 17:00	2	09/27/19 14:00	
Volatiles				
8260C Full List	07/05/19 17:00	10	07/04/19 14:00	
A9F0692-02 2708-190620-MULT802-107 [Water] Sampled 06/20/19 14:30 (GMT-08:00) Pacific Time (US & Canada) 10 Containers				**0 gallons. 1/2 1 L Unpre. ambers received empty, no time on cont.**
Volatiles				
8260C Full List	06/25/19 17:00	2	07/04/19 14:30	
A9F0692-03 2708-190620-MULT802-108 [Water] Sampled 06/20/19 16:10 (GMT-08:00) Pacific Time (US & Canada) 10 Containers				**10,000 gallons**
Volatiles				
8260C Full List	06/25/19 17:00	2	07/04/19 16:10	

Reviewed By

Date

A9F0692

HAHN AND ASSOCIATES, INC.
Environmental Consultants
434 NW Sixth Avenue, Suite 203 • Portland OR 97209
(503) 796-0717 • Fax (503) 227-2209

Laboratory Apex Labs
Tigard, Oregon
Lab Project No.

CHAIN OF CUSTODY

Chain of Custody No. 1

Project Manager: Rob Ede
Project No.: 2708-60F
Project Name: Mult 802 Pump Test
Collected by: AJB / RBE

Liquid with Sediment Sample
___ Test Filtrate ___ Test Sediment ___ Test Both
Multi-Phase Sample
___ Test One (which) ___ Test Separately ___ Shake

Samples Received at 4C (Y or N)
Appropriate Containers Used (Y or N)
Provide Verbal Results (Y or N): No
Provide Preliminary Fax Results: Yes

Sample Number Prefix: 2708-190620-MULT802-

Lab ID	Sample #	Date	Time	Sample Description	Matrix: Soil	Water	Air	Other	Number of Containers	VOCs by EPA Method 8260C	SVOCs (Low Level) by EPA Method 8270D Full List	NWTPH-Dx	NWTPH-Gx	Gasco Metals by EPA 6000/70000 Series	Total Cyanide (EPA 335.4)	Free Cyanide ASTM D-4282-02 (microdiffusion)-Extract in 48 hrs	Available Cyanide OIA-1677		RUSH	Remarks
	TB	20-Jun-19	2:00						1	X										
	-107	20-Jun-19	14:30	0 gallons					10	X									X	2 Day TAT
	-108	20-Jun-19	16:10	10,000 gallons					10	X									X	2 Day TAT

Relinquished by: Rob D. Ede	Hahn and Associates, Inc.	Date: 6-21-19	Time: 1137	Received by: [signature] Apex Labs	Company: 6/21/19
Relinquished by	Company	Date	Time	Received by	Company
Relinquished by	Company	Date	Time	Received by	Company

APEX LABS COOLER RECEIPT FORM

Client: Hahn Element WO#: A9 F0692

Project/Project #: Mult 802 Pump Test 2708-60F

Delivery Info:

Date/time received: 6/21/19 @ 1137 By: CFH

Delivered by: Apex X Client ___ ESS ___ FedEx ___ UPS ___ Swift ___ Senvoy ___ SDS ___ Other ___

Cooler Inspection Date/time inspected: 6/21/19 @ 1213 By: CFH

Chain of Custody included? Yes X No ___ Custody seals? Yes X No ___

Signed/dated by client? Yes X No ___

Signed/dated by Apex? Yes X No ___

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	0.6						
Received on ice? (Y/N)	Y						
Temp. blanks? (Y/N)	Y						
Ice type: (Gel/Real/Other)	Gel						
Condition:	Good						

Cooler out of temp? (Y/(N)) Possible reason why: ___

If some coolers are in temp and some out, were green dots applied to out of temperature samples? Yes/No/(NA)

Out of temperature samples form initiated? Yes/No/(NA)

Samples Inspection: Date/time inspected: 6/21/19 @ 1300 By: CB

All samples intact? Yes X No ___ Comments: ___

Bottle labels/COCs agree? Yes X No ___ Comments: ½ 1L Unp. amkrs for -107 received empty, No time on cont.

COC/container discrepancies form initiated? Yes ___ No ___ NA X

Containers/volumes received appropriate for analysis? Yes X No ___ Comments: ___

Do VOA vials have visible headspace? Yes ___ No X NA ___

Comments ___

Water samples: pH checked: Yes X No ___ NA ___ pH appropriate? Yes X No ___ NA ___

Comments: ___

Additional information: TB # 1876

Labeled by: CB Witness: AMC Cooler Inspected by: CB See Project Contact Form: Y

CLP-Like Forms

Apex Laboratories

SDG: A9F0692

CLASS: GCMS

METHOD: EPA 8260C

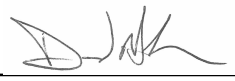
ANALYSES DATA PACKAGE COVER PAGE

EPA 8260C

Laboratory: Apex Laboratories
SDG: A9F0692
Client: Hahn and Associates
Project: Mult 802 Decommissioning

Client Sample Id:	Lab Sample Id:	Matrix
2708-190620-MULT802-TB	A9F0692-01	Water
2708-190620-MULT802-107	A9F0692-02	Water
2708-190620-MULT802-108	A9F0692-03	Water

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been autorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: 
Name: David G. Jack

Forms Created: 10/1/2019 1:49PM
Title: Technical Manager

METHOD DETECTION AND REPORTING LIMITS

EPA 8260C

Laboratory: Apex Laboratories **SDG:** A9F0692

Client: Hahn and Associates **Project:** Mult 802 Decommissioning

Batch Matrix: Water

Analyte	MDL	MRL	Units
Acetone	10.0	20.0	ug/L
Acrylonitrile	1.00	2.00	ug/L
Benzene	0.100	0.200	ug/L
Bromobenzene	0.250	0.500	ug/L
Bromochloromethane	0.500	1.00	ug/L
Bromodichloromethane	0.500	1.00	ug/L
Bromoform	0.500	1.00	ug/L
Bromomethane	5.00	5.00	ug/L
2-Butanone (MEK)	5.00	10.0	ug/L
n-Butylbenzene	0.500	1.00	ug/L
sec-Butylbenzene	0.500	1.00	ug/L
tert-Butylbenzene	0.500	1.00	ug/L
Carbon disulfide	5.00	10.0	ug/L
Carbon tetrachloride	0.500	1.00	ug/L
Chlorobenzene	0.250	0.500	ug/L
Chloroethane	5.00	5.00	ug/L
Chloroform	0.500	1.00	ug/L
Chloromethane	2.50	5.00	ug/L
2-Chlorotoluene	0.500	1.00	ug/L
4-Chlorotoluene	0.500	1.00	ug/L
Dibromochloromethane	0.500	1.00	ug/L
1,2-Dibromo-3-chloropropane	2.50	5.00	ug/L
1,2-Dibromoethane (EDB)	0.250	0.500	ug/L
Dibromomethane	0.500	1.00	ug/L
1,2-Dichlorobenzene	0.250	0.500	ug/L
1,3-Dichlorobenzene	0.250	0.500	ug/L
1,4-Dichlorobenzene	0.250	0.500	ug/L
Dichlorodifluoromethane	0.500	1.00	ug/L
1,1-Dichloroethane	0.200	0.400	ug/L
1,2-Dichloroethane (EDC)	0.200	0.400	ug/L
1,1-Dichloroethene	0.200	0.400	ug/L
cis-1,2-Dichloroethene	0.200	0.400	ug/L
trans-1,2-Dichloroethene	0.200	0.400	ug/L
1,2-Dichloropropane	0.250	0.500	ug/L
1,3-Dichloropropane	0.500	1.00	ug/L
2,2-Dichloropropane	0.500	1.00	ug/L
1,1-Dichloropropene	0.500	1.00	ug/L

METHOD DETECTION AND REPORTING LIMITS

EPA 8260C

Laboratory: Apex Laboratories **SDG:** A9F0692

Client: Hahn and Associates **Project:** Mult 802 Decommissioning

Batch Matrix: Water

Analyte	MDL	MRL	Units
cis-1,3-Dichloropropene	0.500	1.00	ug/L
trans-1,3-Dichloropropene	0.500	1.00	ug/L
Ethylbenzene	0.250	0.500	ug/L
Hexachlorobutadiene	2.50	5.00	ug/L
2-Hexanone	5.00	10.0	ug/L
Isopropylbenzene	0.500	1.00	ug/L
4-Isopropyltoluene	0.500	1.00	ug/L
Methylene chloride	1.50	3.00	ug/L
4-Methyl-2-pentanone (MiBK)	5.00	10.0	ug/L
Methyl tert-butyl ether (MTBE)	0.500	1.00	ug/L
Naphthalene	1.00	2.00	ug/L
n-Propylbenzene	0.250	0.500	ug/L
Styrene	0.500	1.00	ug/L
1,1,1,2-Tetrachloroethane	0.200	0.400	ug/L
1,1,2,2-Tetrachloroethane	0.250	0.500	ug/L
Tetrachloroethene (PCE)	0.200	0.400	ug/L
Toluene	0.500	1.00	ug/L
1,2,3-Trichlorobenzene	1.00	2.00	ug/L
1,2,4-Trichlorobenzene	1.00	2.00	ug/L
1,1,1-Trichloroethane	0.200	0.400	ug/L
1,1,2-Trichloroethane	0.250	0.500	ug/L
Trichloroethene (TCE)	0.200	0.400	ug/L
Trichlorofluoromethane	1.00	2.00	ug/L
1,2,3-Trichloropropane	0.500	1.00	ug/L
1,2,4-Trimethylbenzene	0.500	1.00	ug/L
1,3,5-Trimethylbenzene	0.500	1.00	ug/L
Vinyl chloride	0.200	0.400	ug/L
m,p-Xylene	0.500	1.00	ug/L
o-Xylene	0.250	0.500	ug/L

Note: MDLs are listed only if the corresponding analyte was evalutated to the MDL in this report .

ORGANIC ANALYSIS DATA SHEET

EPA 8260C

2708-190620-MULT802-TB

Laboratory:	Apex Laboratories			SDG:	A9F0692
Client:	Hahn and Associates			Project:	Mult 802 Decommissioning
Matrix:	Water	Laboratory ID:	A9F0692-01	File ID:	VI19062406.D
Sampled:	06/20/19 14:00	Prepared:	06/24/19 10:27	Analyzed:	06/24/19 10:48
		Preparation:	EPA 5030B	Initial/Final:	5 mL / 5 mL

Batch: 9061200 Sequence: 9F24026 Calibration: A9F2102 Instrument: VOA-GCMS9

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	Q
67-64-1	Acetone	1	27.1	
107-13-1	Acrylonitrile	1	1.00	U
71-43-2	Benzene	1	0.100	U
108-86-1	Bromobenzene	1	0.250	U
74-97-5	Bromochloromethane	1	0.500	U
75-27-4	Bromodichloromethane	1	0.500	U
75-25-2	Bromoform	1	0.500	U
74-83-9	Bromomethane	1	5.00	U
78-93-3	2-Butanone (MEK)	1	5.00	U
104-51-8	n-Butylbenzene	1	0.500	U
135-98-8	sec-Butylbenzene	1	0.500	U
98-06-6	tert-Butylbenzene	1	0.500	U
75-15-0	Carbon disulfide	1	5.00	U
56-23-5	Carbon tetrachloride	1	0.500	U
108-90-7	Chlorobenzene	1	0.250	U
75-00-3	Chloroethane	1	5.00	U
67-66-3	Chloroform	1	0.500	U
74-87-3	Chloromethane	1	2.50	U
95-49-8	2-Chlorotoluene	1	0.500	U
106-43-4	4-Chlorotoluene	1	0.500	U
124-48-1	Dibromochloromethane	1	0.500	U
96-12-8	1,2-Dibromo-3-chloropropane	1	2.50	U
106-93-4	1,2-Dibromoethane (EDB)	1	0.250	U
74-95-3	Dibromomethane	1	0.500	U
95-50-1	1,2-Dichlorobenzene	1	0.250	U
541-73-1	1,3-Dichlorobenzene	1	0.250	U
106-46-7	1,4-Dichlorobenzene	1	0.250	U
75-71-8	Dichlorodifluoromethane	1	0.500	U
75-34-3	1,1-Dichloroethane	1	0.200	U
107-06-2	1,2-Dichloroethane (EDC)	1	0.200	U
75-35-4	1,1-Dichloroethene	1	0.200	U
156-59-2	cis-1,2-Dichloroethene	1	0.200	U
156-60-5	trans-1,2-Dichloroethene	1	0.200	U
78-87-5	1,2-Dichloropropane	1	0.250	U
142-28-9	1,3-Dichloropropane	1	0.500	U
594-20-7	2,2-Dichloropropane	1	0.500	U
563-58-6	1,1-Dichloropropene	1	0.500	U
10061-01-5	cis-1,3-Dichloropropene	1	0.500	U
10061-02-6	trans-1,3-Dichloropropene	1	0.500	U
100-41-4	Ethylbenzene	1	0.250	U

ORGANIC ANALYSIS DATA SHEET

EPA 8260C

2708-190620-MULT802-TB

Laboratory:	Apex Laboratories			SDG:	A9F0692
Client:	Hahn and Associates			Project:	Mult 802 Decommissioning
Matrix:	Water	Laboratory ID:	A9F0692-01	File ID:	VI19062406.D
Sampled:	06/20/19 14:00	Prepared:	06/24/19 10:27	Analyzed:	06/24/19 10:48
		Preparation:	EPA 5030B	Initial/Final:	5 mL / 5 mL

Batch: 9061200 Sequence: 9F24026 Calibration: A9F2102 Instrument: VOA-GCMS9

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	Q
87-68-3	Hexachlorobutadiene	1	2.50	U
591-78-6	2-Hexanone	1	5.00	U
98-82-8	Isopropylbenzene	1	0.500	U
99-87-6	4-Isopropyltoluene	1	0.500	U
75-09-2	Methylene chloride	1	1.50	U
108-10-1	4-Methyl-2-pentanone (MiBK)	1	5.00	U
1634-04-4	Methyl tert-butyl ether (MTBE)	1	0.500	U
91-20-3	Naphthalene	1	1.00	U
103-65-1	n-Propylbenzene	1	0.250	U
100-42-5	Styrene	1	0.500	U
630-20-6	1,1,1,2-Tetrachloroethane	1	0.200	U
79-34-5	1,1,2,2-Tetrachloroethane	1	0.250	U
127-18-4	Tetrachloroethene (PCE)	1	0.200	U
87-61-6	1,2,3-Trichlorobenzene	1	1.00	U
120-82-1	1,2,4-Trichlorobenzene	1	1.00	U
71-55-6	1,1,1-Trichloroethane	1	0.200	U
79-00-5	1,1,2-Trichloroethane	1	0.250	U
79-01-6	Trichloroethene (TCE)	1	0.200	U
75-69-4	Trichlorofluoromethane	1	1.00	U
96-18-4	1,2,3-Trichloropropane	1	0.500	U
95-63-6	1,2,4-Trimethylbenzene	1	0.500	U
108-67-8	1,3,5-Trimethylbenzene	1	0.500	U
108-88-3	Toluene	1	0.500	U
75-01-4	Vinyl chloride	1	0.200	U
179601-23-1	m,p-Xylene	1	0.500	U
95-47-6	o-Xylene	1	0.250	U

SYSTEM MONITORING COMPOUND	ADDED (ng/mL)	CONC (ng/mL)	% REC	QC LIMITS	Q
1,4-Difluorobenzene (Surr)	50.0	51.1	102	80 - 120	
Toluene-d8 (Surr)	50.0	51.1	102	80 - 120	
4-Bromofluorobenzene (Surr)	50.0	50.7	101	80 - 120	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene (ISTD)	167630	6.223	192815	6.223	
Chlorobenzene-d5 (ISTD)	247956	9.916	295428	9.916	
1,4-Dichlorobenzene-d4 (ISTD)	111412	11.856	144113	11.856	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET

EPA 8260C

2708-190620-MULT802-107

Laboratory:	Apex Laboratories			SDG:	A9F0692
Client:	Hahn and Associates			Project:	Mult 802 Decommissioning
Matrix:	Water	Laboratory ID:	A9F0692-02	File ID:	VI19062407.D
Sampled:	06/20/19 14:30	Prepared:	06/24/19 10:27	Analyzed:	06/24/19 11:15
		Preparation:	EPA 5030B	Initial/Final:	5 mL / 5 mL

Batch: 9061200 Sequence: 9F24026 Calibration: A9F2102 Instrument: VOA-GCMS9

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	Q
67-64-1	Acetone	100	1000	U
107-13-1	Acrylonitrile	100	100	U
71-43-2	Benzene	100	4590	D
108-86-1	Bromobenzene	100	25.0	U
74-97-5	Bromochloromethane	100	50.0	U
75-27-4	Bromodichloromethane	100	50.0	U
75-25-2	Bromoform	100	50.0	U
74-83-9	Bromomethane	100	500	U
78-93-3	2-Butanone (MEK)	100	500	U
104-51-8	n-Butylbenzene	100	50.0	U
135-98-8	sec-Butylbenzene	100	50.0	U
98-06-6	tert-Butylbenzene	100	50.0	U
75-15-0	Carbon disulfide	100	500	U
56-23-5	Carbon tetrachloride	100	50.0	U
108-90-7	Chlorobenzene	100	25.0	U
75-00-3	Chloroethane	100	500	U
67-66-3	Chloroform	100	50.0	U
74-87-3	Chloromethane	100	250	U
95-49-8	2-Chlorotoluene	100	50.0	U
106-43-4	4-Chlorotoluene	100	50.0	U
124-48-1	Dibromochloromethane	100	50.0	U
96-12-8	1,2-Dibromo-3-chloropropane	100	250	U
106-93-4	1,2-Dibromoethane (EDB)	100	25.0	U
74-95-3	Dibromomethane	100	50.0	U
95-50-1	1,2-Dichlorobenzene	100	25.0	U
541-73-1	1,3-Dichlorobenzene	100	25.0	U
106-46-7	1,4-Dichlorobenzene	100	25.0	U
75-71-8	Dichlorodifluoromethane	100	50.0	U
75-34-3	1,1-Dichloroethane	100	20.0	U
107-06-2	1,2-Dichloroethane (EDC)	100	20.0	U
75-35-4	1,1-Dichloroethene	100	20.0	U
156-59-2	cis-1,2-Dichloroethene	100	20.0	U
156-60-5	trans-1,2-Dichloroethene	100	20.0	U
78-87-5	1,2-Dichloropropane	100	25.0	U
142-28-9	1,3-Dichloropropane	100	50.0	U
594-20-7	2,2-Dichloropropane	100	50.0	U
563-58-6	1,1-Dichloropropene	100	50.0	U
10061-01-5	cis-1,3-Dichloropropene	100	50.0	U
10061-02-6	trans-1,3-Dichloropropene	100	50.0	U
100-41-4	Ethylbenzene	100	79.8	D

ORGANIC ANALYSIS DATA SHEET

EPA 8260C

2708-190620-MULT802-107

Laboratory:	Apex Laboratories			SDG:	A9F0692
Client:	Hahn and Associates			Project:	Mult 802 Decommissioning
Matrix:	Water	Laboratory ID:	A9F0692-02	File ID:	VI19062407.D
Sampled:	06/20/19 14:30	Prepared:	06/24/19 10:27	Analyzed:	06/24/19 11:15
		Preparation:	EPA 5030B	Initial/Final:	5 mL / 5 mL

Batch: 9061200 Sequence: 9F24026 Calibration: A9F2102 Instrument: VOA-GCMS9

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	Q
87-68-3	Hexachlorobutadiene	100	250	U
591-78-6	2-Hexanone	100	500	U
98-82-8	Isopropylbenzene	100	50.0	U
99-87-6	4-Isopropyltoluene	100	50.0	U
75-09-2	Methylene chloride	100	150	U
108-10-1	4-Methyl-2-pentanone (MiBK)	100	500	U
1634-04-4	Methyl tert-butyl ether (MTBE)	100	50.0	U
91-20-3	Naphthalene	100	4320	D
103-65-1	n-Propylbenzene	100	25.0	U
100-42-5	Styrene	100	108	D
630-20-6	1,1,1,2-Tetrachloroethane	100	20.0	U
79-34-5	1,1,2,2-Tetrachloroethane	100	25.0	U
127-18-4	Tetrachloroethene (PCE)	100	20.0	U
87-61-6	1,2,3-Trichlorobenzene	100	100	U
120-82-1	1,2,4-Trichlorobenzene	100	100	U
71-55-6	1,1,1-Trichloroethane	100	20.0	U
79-00-5	1,1,2-Trichloroethane	100	25.0	U
79-01-6	Trichloroethene (TCE)	100	20.0	U
75-69-4	Trichlorofluoromethane	100	100	U
96-18-4	1,2,3-Trichloropropane	100	50.0	U
95-63-6	1,2,4-Trimethylbenzene	100	74.6	JD
108-67-8	1,3,5-Trimethylbenzene	100	50.0	U
108-88-3	Toluene	100	1120	D
75-01-4	Vinyl chloride	100	20.0	U
179601-23-1	m,p-Xylene	100	270	D
95-47-6	o-Xylene	100	110	D

SYSTEM MONITORING COMPOUND	ADDED (ng/mL)	CONC (ng/mL)	% REC	QC LIMITS	Q
1,4-Difluorobenzene (Surr)	50.0	50.9	102	80 - 120	
Toluene-d8 (Surr)	50.0	50.9	102	80 - 120	
4-Bromofluorobenzene (Surr)	50.0	50.1	100	80 - 120	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene (ISTD)	174524	6.223	192815	6.223	
Chlorobenzene-d5 (ISTD)	260097	9.916	295428	9.916	
1,4-Dichlorobenzene-d4 (ISTD)	118113	11.856	144113	11.856	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET

EPA 8260C

2708-190620-MULT802-108

Laboratory:	Apex Laboratories			SDG:	A9F0692
Client:	Hahn and Associates			Project:	Mult 802 Decommissioning
Matrix:	Water	Laboratory ID:	A9F0692-03RE1	File ID:	VI19062425.D
Sampled:	06/20/19 16:10	Prepared:	06/24/19 10:27	Analyzed:	06/24/19 19:22
		Preparation:	EPA 5030B	Initial/Final:	5 mL / 5 mL

Batch: 9061200 Sequence: 9F24026 Calibration: A9F2102 Instrument: VOA-GCMS9

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	Q
67-64-1	Acetone	10	107	JD
107-13-1	Acrylonitrile	10	10.0	U
71-43-2	Benzene	10	451	D
108-86-1	Bromobenzene	10	2.50	U
74-97-5	Bromochloromethane	10	5.00	U
75-27-4	Bromodichloromethane	10	5.00	U
75-25-2	Bromoform	10	5.00	U
74-83-9	Bromomethane	10	50.0	U
78-93-3	2-Butanone (MEK)	10	50.0	U
104-51-8	n-Butylbenzene	10	5.00	U
135-98-8	sec-Butylbenzene	10	5.00	U
98-06-6	tert-Butylbenzene	10	5.00	U
75-15-0	Carbon disulfide	10	50.0	U
56-23-5	Carbon tetrachloride	10	5.00	U
108-90-7	Chlorobenzene	10	2.50	U
75-00-3	Chloroethane	10	50.0	U
67-66-3	Chloroform	10	5.00	U
74-87-3	Chloromethane	10	25.0	U
95-49-8	2-Chlorotoluene	10	5.00	U
106-43-4	4-Chlorotoluene	10	5.00	U
124-48-1	Dibromochloromethane	10	5.00	U
96-12-8	1,2-Dibromo-3-chloropropane	10	25.0	U
106-93-4	1,2-Dibromoethane (EDB)	10	2.50	U
74-95-3	Dibromomethane	10	5.00	U
95-50-1	1,2-Dichlorobenzene	10	2.50	U
541-73-1	1,3-Dichlorobenzene	10	2.50	U
106-46-7	1,4-Dichlorobenzene	10	2.50	U
75-71-8	Dichlorodifluoromethane	10	5.00	U
75-34-3	1,1-Dichloroethane	10	2.00	U
107-06-2	1,2-Dichloroethane (EDC)	10	2.00	U
75-35-4	1,1-Dichloroethene	10	2.00	U
156-59-2	cis-1,2-Dichloroethene	10	2.00	U
156-60-5	trans-1,2-Dichloroethene	10	2.00	U
78-87-5	1,2-Dichloropropane	10	2.50	U
142-28-9	1,3-Dichloropropane	10	5.00	U
594-20-7	2,2-Dichloropropane	10	5.00	U
563-58-6	1,1-Dichloropropene	10	5.00	U
10061-01-5	cis-1,3-Dichloropropene	10	5.00	U
10061-02-6	trans-1,3-Dichloropropene	10	5.00	U
100-41-4	Ethylbenzene	10	21.9	D

ORGANIC ANALYSIS DATA SHEET

EPA 8260C

2708-190620-MULT802-108

Laboratory: Apex Laboratories | SDG: A9F0692

Client: Hahn and Associates | Project: Mult 802 Decommissioning

Matrix: Water | Laboratory ID: A9F0692-03RE1 | File ID: VI19062425.D

Sampled: 06/20/19 16:10 | Prepared: 06/24/19 10:27 | Analyzed: 06/24/19 19:22

Preparation: EPA 5030B | Initial/Final: 5 mL / 5 mL

Batch: 9061200 | Sequence: 9F24026 | Calibration: A9F2102 | Instrument: VOA-GCMS9

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	Q
87-68-3	Hexachlorobutadiene	10	25.0	U
591-78-6	2-Hexanone	10	50.0	U
98-82-8	Isopropylbenzene	10	5.00	U
99-87-6	4-Isopropyltoluene	10	5.00	U
75-09-2	Methylene chloride	10	15.0	U
108-10-1	4-Methyl-2-pentanone (MiBK)	10	50.0	U
1634-04-4	Methyl tert-butyl ether (MTBE)	10	5.00	U
91-20-3	Naphthalene	10	1320	D
103-65-1	n-Propylbenzene	10	2.50	U
100-42-5	Styrene	10	14.6	D
630-20-6	1,1,1,2-Tetrachloroethane	10	2.00	U
79-34-5	1,1,2,2-Tetrachloroethane	10	2.50	U
127-18-4	Tetrachloroethene (PCE)	10	2.00	U
87-61-6	1,2,3-Trichlorobenzene	10	10.0	U
120-82-1	1,2,4-Trichlorobenzene	10	10.0	U
71-55-6	1,1,1-Trichloroethane	10	2.00	U
79-00-5	1,1,2-Trichloroethane	10	2.50	U
79-01-6	Trichloroethene (TCE)	10	2.00	U
75-69-4	Trichlorofluoromethane	10	10.0	U
96-18-4	1,2,3-Trichloropropane	10	5.00	U
95-63-6	1,2,4-Trimethylbenzene	10	12.7	D
108-67-8	1,3,5-Trimethylbenzene	10	5.12	JD
108-88-3	Toluene	10	127	D
75-01-4	Vinyl chloride	10	2.00	U
179601-23-1	m,p-Xylene	10	45.5	D
95-47-6	o-Xylene	10	18.2	D

SYSTEM MONITORING COMPOUND	ADDED (ng/mL)	CONC (ng/mL)	% REC	QC LIMITS	Q
1,4-Difluorobenzene (Surr)	50.0	50.6	101	80 - 120	
Toluene-d8 (Surr)	50.0	50.5	101	80 - 120	
4-Bromofluorobenzene (Surr)	50.0	48.6	97	80 - 120	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene (ISTD)	150858	6.223	192815	6.223	
Chlorobenzene-d5 (ISTD)	226275	9.916	295428	9.916	
1,4-Dichlorobenzene-d4 (ISTD)	105684	11.856	144113	11.856	

* Values outside of QC limits

PREPARATION BATCH SUMMARY

EPA 8260C

Laboratory: Apex Laboratories SDG: A9F0692

Client: Hahn and Associates Project: Mult 802 Decommissioning

Batch: 9061200 Batch Matrix: Water Preparation: EPA 5030B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
Blank	9061200-BLK1	VI19062405.D	06/24/19 08:27	
LCS	9061200-BS1	VI19062403.D	06/24/19 08:27	
2708-190620-MULT802-TB	A9F0692-01	VI19062406.D	06/24/19 10:27	
2708-190620-MULT802-107	A9F0692-02	VI19062407.D	06/24/19 10:27	
2708-190620-MULT802-108	A9F0692-03RE1	VI19062425.D	06/24/19 10:27	

Note: Client samples are listed only if they are included in this report.
Duplicates and Matrix Spike/Duplicates QC Samples are only listed if sourced from a sample included in this report.

METHOD BLANK DATA SHEET
EPA 8260C

Laboratory:	Apex Laboratories			SDG:	A9F0692
Client:	Hahn and Associates			Project:	Mult 802 Decommissioning
Matrix:	Water	Laboratory ID:	9061200-BLK1	File ID:	VI19062405.D
Prepared:	06/24/19 08:27	Preparation:	EPA 5030B	Initial/Final:	5 mL / 5 mL
Analyzed:	06/24/19 10:21	Instrument:	VOA-GCMS9		
Batch:	9061200	Sequence:	9F24026	Calibration:	A9F2102

CAS NO.	COMPOUND	CONC. (ug/L)	Q
67-64-1	Acetone	10.0	U
107-13-1	Acrylonitrile	1.00	U
71-43-2	Benzene	0.100	U
108-86-1	Bromobenzene	0.250	U
74-97-5	Bromochloromethane	0.500	U
75-27-4	Bromodichloromethane	0.500	U
75-25-2	Bromoform	0.500	U
74-83-9	Bromomethane	5.00	U
78-93-3	2-Butanone (MEK)	5.00	U
104-51-8	n-Butylbenzene	0.500	U
135-98-8	sec-Butylbenzene	0.500	U
98-06-6	tert-Butylbenzene	0.500	U
75-15-0	Carbon disulfide	5.00	U
56-23-5	Carbon tetrachloride	0.500	U
108-90-7	Chlorobenzene	0.250	U
75-00-3	Chloroethane	5.00	U
67-66-3	Chloroform	0.500	U
74-87-3	Chloromethane	2.50	U
95-49-8	2-Chlorotoluene	0.500	U
106-43-4	4-Chlorotoluene	0.500	U
124-48-1	Dibromochloromethane	0.500	U
96-12-8	1,2-Dibromo-3-chloropropane	2.50	U
106-93-4	1,2-Dibromoethane (EDB)	0.250	U
74-95-3	Dibromomethane	0.500	U
95-50-1	1,2-Dichlorobenzene	0.250	U
541-73-1	1,3-Dichlorobenzene	0.250	U
106-46-7	1,4-Dichlorobenzene	0.250	U
75-71-8	Dichlorodifluoromethane	0.500	U
75-34-3	1,1-Dichloroethane	0.200	U
107-06-2	1,2-Dichloroethane (EDC)	0.200	U
75-35-4	1,1-Dichloroethene	0.200	U
156-59-2	cis-1,2-Dichloroethene	0.200	U
156-60-5	trans-1,2-Dichloroethene	0.200	U
78-87-5	1,2-Dichloropropane	0.250	U
142-28-9	1,3-Dichloropropane	0.500	U

METHOD BLANK DATA SHEET

EPA 8260C

Laboratory:	Apex Laboratories			SDG:	A9F0692
Client:	Hahn and Associates			Project:	Mult 802 Decommissioning
Matrix:	Water	Laboratory ID:	9061200-BLK1	File ID:	VI19062405.D
Prepared:	06/24/19 08:27	Preparation:	EPA 5030B	Initial/Final:	5 mL / 5 mL
Analyzed:	06/24/19 10:21	Instrument:	VOA-GCMS9		
Batch:	9061200	Sequence:	9F24026	Calibration:	A9F2102

CAS NO.	COMPOUND	CONC. (ug/L)	Q
594-20-7	2,2-Dichloropropane	0.500	U
563-58-6	1,1-Dichloropropene	0.500	U
10061-01-5	cis-1,3-Dichloropropene	0.500	U
10061-02-6	trans-1,3-Dichloropropene	0.500	U
100-41-4	Ethylbenzene	0.250	U
87-68-3	Hexachlorobutadiene	2.50	U
591-78-6	2-Hexanone	5.00	U
98-82-8	Isopropylbenzene	0.500	U
99-87-6	4-Isopropyltoluene	0.500	U
75-09-2	Methylene chloride	1.50	U
108-10-1	4-Methyl-2-pentanone (MiBK)	5.00	U
1634-04-4	Methyl tert-butyl ether (MTBE)	0.500	U
91-20-3	Naphthalene	1.00	U
103-65-1	n-Propylbenzene	0.250	U
100-42-5	Styrene	0.500	U
630-20-6	1,1,1,2-Tetrachloroethane	0.200	U
79-34-5	1,1,2,2-Tetrachloroethane	0.250	U
127-18-4	Tetrachloroethene (PCE)	0.200	U
87-61-6	1,2,3-Trichlorobenzene	1.00	U
120-82-1	1,2,4-Trichlorobenzene	1.00	U
71-55-6	1,1,1-Trichloroethane	0.200	U
79-00-5	1,1,2-Trichloroethane	0.250	U
79-01-6	Trichloroethene (TCE)	0.200	U
75-69-4	Trichlorofluoromethane	1.00	U
96-18-4	1,2,3-Trichloropropane	0.500	U
95-63-6	1,2,4-Trimethylbenzene	0.500	U
108-67-8	1,3,5-Trimethylbenzene	0.500	U
108-88-3	Toluene	0.500	U
75-01-4	Vinyl chloride	0.200	U
179601-23-1	m,p-Xylene	0.500	U
95-47-6	o-Xylene	0.250	U

SYSTEM MONITORING COMPOUND	ADDED (ng/mL)	CONC (ng/mL)	% REC	QC LIMITS	Q
1,4-Difluorobenzene (Surr)	50.0	50.4	101	80 - 120	
Toluene-d8 (Surr)	50.0	50.5	101	80 - 120	

METHOD BLANK DATA SHEET
EPA 8260C

Laboratory:	Apex Laboratories			SDG:	A9F0692
Client:	Hahn and Associates			Project:	Mult 802 Decommissioning
Matrix:	Water	Laboratory ID:	9061200-BLK1	File ID:	VI19062405.D
Prepared:	06/24/19 08:27	Preparation:	EPA 5030B	Initial/Final:	5 mL / 5 mL
Analyzed:	06/24/19 10:21	Instrument:	VOA-GCMS9		
Batch:	9061200	Sequence:	9F24026	Calibration:	A9F2102

SYSTEM MONITORING COMPOUND	ADDED (ng/mL)	CONC (ng/mL)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surr)	50.0	50.1	100	80 - 120	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene (ISTD)	184427	6.223	192815	6.223	
Chlorobenzene-d5 (ISTD)	276933	9.916	295428	9.916	
1,4-Dichlorobenzene-d4 (ISTD)	123478	11.856	144113	11.856	

LCS / LCS DUPLICATE RECOVERY

EPA 8260C

Laboratory:	Apex Laboratories	SDG:	A9F0692
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Matrix:	Water		
Batch:	9061200	Laboratory ID:	9061200-BS1
Preparation:	EPA 5030B	Initial/Final:	5 mL / 5 mL

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC. (*=Out)	QC LIMITS REC.
Acetone	40.0	40.7	102	80 - 120
Acrylonitrile	20.0	21.8	109	80 - 120
Benzene	20.0	20.2	101	80 - 120
Bromobenzene	20.0	19.8	99	80 - 120
Bromochloromethane	20.0	21.4	107	80 - 120
Bromodichloromethane	20.0	21.5	108	80 - 120
Bromoform	20.0	22.2	111	80 - 120
Bromomethane	20.0	18.6	93	80 - 120
2-Butanone (MEK)	40.0	42.9	107	80 - 120
n-Butylbenzene	20.0	20.2	101	80 - 120
sec-Butylbenzene	20.0	19.7	99	80 - 120
tert-Butylbenzene	20.0	20.0	100	80 - 120
Carbon disulfide	20.0	19.8	99	80 - 120
Carbon tetrachloride	20.0	21.4	107	80 - 120
Chlorobenzene	20.0	20.3	102	80 - 120
Chloroethane	20.0	19.3	96	80 - 120
Chloroform	20.0	20.7	103	80 - 120
Chloromethane	20.0	18.9	95	80 - 120
2-Chlorotoluene	20.0	19.6	98	80 - 120
4-Chlorotoluene	20.0	19.8	99	80 - 120
Dibromochloromethane	20.0	21.8	109	80 - 120
1,2-Dibromo-3-chloropropane	20.0	21.1	106	80 - 120
1,2-Dibromoethane (EDB)	20.0	21.2	106	80 - 120
Dibromomethane	20.0	21.4	107	80 - 120
1,2-Dichlorobenzene	20.0	20.4	102	80 - 120
1,3-Dichlorobenzene	20.0	19.9	100	80 - 120
1,4-Dichlorobenzene	20.0	19.8	99	80 - 120
Dichlorodifluoromethane	20.0	20.6	103	80 - 120
1,1-Dichloroethane	20.0	21.1	106	80 - 120
1,2-Dichloroethane (EDC)	20.0	21.1	105	80 - 120

LCS / LCS DUPLICATE RECOVERY

EPA 8260C

Laboratory:	Apex Laboratories	SDG:	A9F0692
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Matrix:	Water		
Batch:	9061200	Laboratory ID:	9061200-BS1
Preparation:	EPA 5030B	Initial/Final:	5 mL / 5 mL

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC. (*=Out)	QC LIMITS REC.
1,1-Dichloroethene	20.0	21.2	106	80 - 120
cis-1,2-Dichloroethene	20.0	21.2	106	80 - 120
trans-1,2-Dichloroethene	20.0	20.7	104	80 - 120
1,2-Dichloropropane	20.0	21.0	105	80 - 120
1,3-Dichloropropane	20.0	20.7	104	80 - 120
2,2-Dichloropropane	20.0	21.5	107	80 - 120
1,1-Dichloropropene	20.0	20.6	103	80 - 120
cis-1,3-Dichloropropene	20.0	20.7	103	80 - 120
trans-1,3-Dichloropropene	20.0	21.4	107	80 - 120
Ethylbenzene	20.0	20.2	101	80 - 120
Hexachlorobutadiene	20.0	20.6	103	80 - 120
2-Hexanone	40.0	42.0	105	80 - 120
Isopropylbenzene	20.0	20.5	102	80 - 120
4-Isopropyltoluene	20.0	20.7	103	80 - 120
Methylene chloride	20.0	20.0	100	80 - 120
4-Methyl-2-pentanone (MiBK)	40.0	42.6	106	80 - 120
Methyl tert-butyl ether (MTBE)	20.0	20.4	102	80 - 120
Naphthalene	20.0	20.4	102	80 - 120
n-Propylbenzene	20.0	19.6	98	80 - 120
Styrene	20.0	20.9	104	80 - 120
1,1,1,2-Tetrachloroethane	20.0	22.1	111	80 - 120
1,1,2,2-Tetrachloroethane	20.0	20.8	104	80 - 120
Tetrachloroethene (PCE)	20.0	19.7	98	80 - 120
1,2,3-Trichlorobenzene	20.0	20.6	103	80 - 120
1,2,4-Trichlorobenzene	20.0	20.6	103	80 - 120
1,1,1-Trichloroethane	20.0	21.2	106	80 - 120
1,1,2-Trichloroethane	20.0	20.8	104	80 - 120
Trichloroethene (TCE)	20.0	20.5	102	80 - 120
Trichlorofluoromethane	20.0	20.8	104	80 - 120
1,2,3-Trichloropropane	20.0	21.1	106	80 - 120

LCS / LCS DUPLICATE RECOVERY

EPA 8260C

Laboratory:	Apex Laboratories	SDG:	A9F0692
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Matrix:	Water		
Batch:	9061200	Laboratory ID:	9061200-BS1
Preparation:	EPA 5030B	Initial/Final:	5 mL / 5 mL

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC. (*=Out)	QC LIMITS REC.
1,2,4-Trimethylbenzene	20.0	20.4	102	80 - 120
1,3,5-Trimethylbenzene	20.0	19.9	100	80 - 120
Toluene	20.0	19.5	97	80 - 120
Vinyl chloride	20.0	20.7	104	80 - 120
m,p-Xylene	40.0	40.6	101	80 - 120
o-Xylene	20.0	20.4	102	80 - 120

* = Values outside of QC limits

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8260C

Laboratory:	Apex Laboratories	SDG:	A9F0692
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9F20044	Instrument:	VOA-GCMS9
Matrix:	Water	Calibration:	A9F2102

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	9F20044-TUN1	VI19062018.D	06/20/19 17:22
Initial Cal Blank	9F20044-ICB1	VI19062019.D	06/20/19 17:49
Cal Standard	9F20044-CAL1	VI19062020.D	06/20/19 18:16
Cal Standard	9F20044-CAL2	VI19062021.D	06/20/19 18:43
Cal Standard	9F20044-CAL3	VI19062022.D	06/20/19 19:10
Cal Standard	9F20044-CAL4	VI19062023.D	06/20/19 19:37
Cal Standard	9F20044-CAL5	VI19062024.D	06/20/19 20:04
Cal Standard	9F20044-CAL6	VI19062025.D	06/20/19 20:31
Cal Standard	9F20044-CAL7	VI19062026.D	06/20/19 20:58
Cal Standard	9F20044-CAL8	VI19062027.D	06/20/19 21:25
Cal Standard	9F20044-CAL9	VI19062028.D	06/20/19 21:52
Cal Standard	9F20044-CALA	VI19062030.D	06/20/19 22:46
Cal Standard	9F20044-CALB	VI19062032.D	06/20/19 23:40
Initial Cal Check	9F20044-ICV1	VI19062035.D	06/21/19 01:01
Initial Cal Check	9F20044-ICV2	VI19062036.D	06/21/19 01:28

Note: Client samples are listed only if they are included in this report.
Duplicates and Matrix Spike/Duplicates QC Samples are only listed if sourced from a sample included in this report.

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8260C

Laboratory:	Apex Laboratories	SDG:	A9F0692
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9F24026	Instrument:	VOA-GCMS9
Matrix:	Water	Calibration:	A9F2102

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	9F24026-TUN1	VI19062402.D	06/24/19 09:00
Calibration Check	9F24026-CCV1	VI19062403.D	06/24/19 09:27
Blank	9061200-BLK1	VI19062405.D	06/24/19 10:21
2708-190620-MULT802-TB	A9F0692-01	VI19062406.D	06/24/19 10:48
2708-190620-MULT802-107	A9F0692-02	VI19062407.D	06/24/19 11:15
2708-190620-MULT802-108	A9F0692-03RE1	VI19062425.D	06/24/19 19:22

Note: Client samples are listed only if they are included in this report.
Duplicates and Matrix Spike/Duplicates QC Samples are only listed if sourced from a sample included in this report.

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA 8260C

Laboratory:	Apex Laboratories	SDG:	A9F0692
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Lab File ID:	VI19062018.D	Injection Date:	06/20/19
Instrument ID:	VOA-GCMS9	Injection Time:	17:22
Sequence:	9F20044	Lab Sample ID:	9F20044-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
m/z 50			
m/z 75			
m/z 95		128.04	
m/z 96	5 - 9% of m/z 95	6.90	PASS
m/z 173		0.11	
m/z 174	50 - 200% of m/z 95	78.10	PASS
m/z 175	5 - 9% of m/z 174	7.26	PASS
m/z 176	95 - 101% of m/z 174	95.67	PASS
m/z 177	5 - 9% of m/z 176	6.77	PASS

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA 8260C

Laboratory:	Apex Laboratories	SDG:	A9F0692
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Lab File ID:	VI19062402.D	Injection Date:	06/24/19
Instrument ID:	VOA-GCMS9	Injection Time:	09:00
Sequence:	9F24026	Lab Sample ID:	9F24026-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
m/z 50			
m/z 75			
m/z 95		131.75	
m/z 96	5 - 9% of m/z 95	6.72	PASS
m/z 173		0.00	
m/z 174	50 - 200% of m/z 95	75.90	PASS
m/z 175	5 - 9% of m/z 174	7.29	PASS
m/z 176	95 - 101% of m/z 174	96.99	PASS
m/z 177	5 - 9% of m/z 176	6.68	PASS

INITIAL CALIBRATION DATA (Summary)

EPA 8260C

Laboratory: Apex Laboratories SDG: A9F0692

Client: Hahn and Associates Project: Mult 802 Decommissioning

Calibration: A9F2102 Date: 06/21/19 11:39 Instrument: VOA-GCMS9

Compound	Mean RF	FIT	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Acetone	0.2434885	Ave	10.57588	3.947	0.1096385			20	
Acrylonitrile	0.2765704	Ave	6.340252	4.75625	8.197235E-02			20	
Benzene	2.085786	Ave	3.179848	6.1277	4.804954E-02			20	
Bromobenzene	0.7663908	Ave	4.61144	11.0638	2.828284E-02			20	
Bromochloromethane	0.3246896	Ave	10.66199	5.451333	4.756015E-02			20	
Bromodichloromethane	0.6163157	Ave	9.411398	7.386333	3.198394E-02			20	
Bromoform	0.1738399	XXX	19.41734	10.543	1.812746E-02				
Bromomethane	0.3070322	Ave	13.49949	2.366	0.1355651			20	
2-Butanone (MEK)	0.4055141	Ave	5.176776	5.86325	8.491372E-02			20	
n-Butylbenzene	2.065014	Ave	8.763843	12.051	7.106634E-03			20	
sec-Butylbenzene	2.852736	Ave	5.863855	11.625	0			20	
tert-Butylbenzene	1.32558	Ave	5.518179	11.485	1.992181E-02			20	
Carbon disulfide	1.21758	Ave	3.983349	3.256	9.022187E-02			20	
Carbon tetrachloride	0.5490465	Ave	10.54705	5.66675	5.094061E-02			20	
Chlorobenzene	0.8672482	Ave	4.527721	9.934	6.59496E-03			20	
Chloroethane	0.2111647	Ave	5.052347	1.670667	77.46032			20	
Chloroform	0.8978863	Ave	4.359938	5.533667	8.015743E-02			20	
Chloromethane	0.6601212	Ave	9.097732	1.899778	0.1685629			20	
2-Chlorotoluene	0.6874441	Ave	5.058205	11.21156	1.102865E-02			20	
4-Chlorotoluene	2.131242	Ave	4.745225	11.3402	3.047566E-02			20	
Dibromochloromethane	0.2950505	Ave	14.87347	9.19275	0.0296783			20	
1,2-Dibromo-3-chloropropane	0.20274	Ave	12.43876	12.80514	9.19731E-03			20	
1,2-Dibromoethane (EDB)	0.3313323	Ave	12.57973	9.4314	4.247559E-02			20	
Dibromomethane	0.3318667	Ave	10.85933	7.204556	4.029543E-02			20	
1,2-Dichlorobenzene	1.298963	Ave	5.237602	12.1856	1.516183E-02			20	
1,3-Dichlorobenzene	1.341062	Ave	4.31851	11.8019	1.633031E-02			20	
1,4-Dichlorobenzene	1.38445	Ave	2.929356	11.8687	8.839948E-03			20	
Dichlorodifluoromethane	0.5184938	Ave	10.81728	1.683556	0.246695			20	
1,1-Dichloroethane	0.8696756	Ave	6.909406	4.69	0.0666443			20	
1,2-Dichloroethane (EDC)	0.6886107	Ave	5.651383	6.347555	4.920795E-02			20	
1,1-Dichloroethene	0.6757149	Ave	9.405083	3.2396	9.709839E-02			20	
cis-1,2-Dichloroethene	0.7043514	Ave	4.649517	5.250556	3.922802E-02			20	
trans-1,2-Dichloroethene	0.6599966	Ave	6.022416	4.045667	9.080339E-02			20	

INITIAL CALIBRATION DATA (Summary)

EPA 8260C

Laboratory: Apex Laboratories SDG: A9F0692

Client: Hahn and Associates Project: Mult 802 Decommissioning

Calibration: A9F2102 Date: 06/21/19 11:39 Instrument: VOA-GCMS9

Compound	Mean RF	FIT	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
1,2-Dichloropropane	0.5341861	Ave	5.750668	7.315333	4.418093E-02			20	
1,3-Dichloropropane	0.5607217	Ave	5.669531	9.295667	1.921146E-02			20	
2,2-Dichloropropane	0.6793414	Ave	4.035735	5.359	1.104518E-02			20	
1,1-Dichloropropene	0.6821729	Ave	5.591481	5.868667	6.628735E-02			20	
cis-1,3-Dichloropropene	0.5136052	Ave	9.382632	8.097667	1.938171E-02			20	
trans-1,3-Dichloropropene	0.4702767	Ave	10.91174	8.843667	3.234112E-02			20	
Ethylbenzene	1.493816	Ave	5.347931	9.958	1.329946E-02			20	
Hexachlorobutadiene	0.1872556	Ave	12.09856	13.31088	2.063208E-02			20	
2-Hexanone	0.3682236	Ave	5.057007	9.660667	0.0222956			20	
Isopropylbenzene	1.358566	Ave	7.170939	10.737	1.094524E-02			20	
4-Isopropyltoluene	2.251459	Ave	8.968072	11.7289	6.107456E-03			20	
Methylene chloride	2.134529	XXX	157.5961	3.878273	8.108968E-02				
4-Methyl-2-pentanone (MiBK)	0.5000627	Ave	5.157486	8.804	3.549445E-02			20	
Methyl tert-butyl ether (MTBE)	1.615841	Ave	4.015685	4.175667	0.1034204			20	
Naphthalene	2.443898	Ave	11.3127	13.633	1.635699E-02			20	
n-Propylbenzene	3.40326	Ave	5.7569	11.078	1.155977E-02			20	
Styrene	0.8763555	Ave	9.973425	10.5192	2.673313E-02			20	
1,1,1,2-Tetrachloroethane	0.2648021	Ave	14.7394	9.994333	2.417115E-02			20	
1,1,2,2-Tetrachloroethane	0.6419819	Ave	6.675706	11.1449	1.077536E-02			20	
Tetrachloroethene (PCE)	0.3239928	Ave	6.875949	8.803	2.740398E-02			20	
1,2,3-Trichlorobenzene	0.7253453	Ave	10.60542	13.791	1.731092E-02			20	
1,2,4-Trichlorobenzene	0.7471468	Ave	12.91952	13.351	2.970094E-02			20	
1,1,1-Trichloroethane	0.7156421	Ave	6.573862	5.739333	5.415064E-02			20	
1,1,2-Trichloroethane	0.3146206	Ave	7.894284	9.011667	3.782794E-02			20	
Trichloroethene (TCE)	0.5045859	Ave	6.149816	6.748	4.467709E-02			20	
Trichlorofluoromethane	0.6675443	Ave	6.447225	2.669333	0.2085856			20	
1,2,3-Trichloropropane	0.2947877	Ave	11.9915	11.254	1.372952E-02			20	
1,2,4-Trimethylbenzene	2.306115	Ave	6.68386	11.54	1.009832E-02			20	
1,3,5-Trimethylbenzene	2.300226	Ave	5.524091	11.236	1.129174E-02			20	
Toluene	1.426251	Ave	5.866511	8.364	2.333015E-02			20	
Vinyl chloride	0.5947047	Ave	5.542041	2.001	0.1999135			20	
m,p-Xylene	1.125331	Ave	5.380841	10.092	9.363782E-03			20	
o-Xylene	1.147079	Ave	6.205049	10.47064	2.902251E-02			20	

INITIAL CALIBRATION DATA (Summary)

EPA 8260C

Laboratory: Apex Laboratories SDG: A9F0692

Client: Hahn and Associates Project: Mult 802 Decommissioning

Calibration: A9F2102 Date: 06/21/19 11:39 Instrument: VOA-GCMS9

Compound	Mean RF	FIT	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
1,4-Difluorobenzene (Surr)	1.664164	Ave	0.8140014	6.788455	0.0320221			20	
Toluene-d8 (Surr)	1.306405	Ave	0.7600449	8.303636	9.634716E-03			20	
4-Bromofluorobenzene (Surr)	0.82839	Ave	1.789762	10.98	1.732521E-02			20	

Note: ** Quad COD may be incorrect if weighting (1/a) or (1/a2) used. Weighting not shown here. Please see instrument calibration printouts for validation.

INITIAL CALIBRATION DATA

EPA 8260C

Laboratory: Apex Laboratories
SDG: A9F0692
Client: Hahn and Associates
Project: Mult 802 Decommissioning
Calibration: A9F2102
Instrument: VOA-GCMS9
Calibration Date: 06/21/19 11:39

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF
Acetone	0.2	~~0~~	0.4	~~0~~	0.8	~~0~~	2	~~0~~	4	0.2904717	10	0.2572179
Acrylonitrile	0.1	~~0~~	0.2	~~0~~	0.4	~~0~~	1	0.2542605	2	0.2540798	5	0.2714708
Benzene	0.1	~~0~~	0.2	2.177207	0.4	2.088322	1	1.99968	2	2.036259	5	2.02653
Bromobenzene	0.1	~~0~~	0.2	0.7095471	0.4	0.7336159	1	0.7568372	2	0.7832631	5	0.7429801
Bromochloromethane	0.1	~~0~~	0.2	~~0~~	0.4	0.2525171	1	0.305631	2	0.3210699	5	0.337842
Bromodichloromethane	0.1	~~0~~	0.2	~~0~~	0.4	0.5483723	1	0.5337349	2	0.5843231	5	0.5848929
Bromoform	0.1	~~0~~	0.2	~~0~~	0.4	~~0~~	1	0.134525	2	0.1528593	5	0.1601587
Bromomethane	0.1	~~0~~	0.2	~~0~~	0.4	~~0~~	1	0.394469	2	0.3365199	5	0.2919001
2-Butanone (MEK)	0.2	~~0~~	0.4	~~0~~	0.8	~~0~~	2	0.4387701	4	0.4224604	10	0.3931671
n-Butylbenzene	0.1	~~0~~	0.2	1.791344	0.4	1.939327	1	1.860344	2	1.933164	5	2.00098
sec-Butylbenzene	0.1	~~0~~	0.2	2.962272	0.4	2.548975	1	2.775757	2	2.677	5	2.723194
tert-Butylbenzene	0.1	~~0~~	0.2	1.296758	0.4	1.170898	1	1.28199	2	1.325211	5	1.287755
Carbon disulfide	0.1	~~0~~	0.2	~~0~~	0.4	1.17822	1	1.160785	2	1.197494	5	1.182756
Carbon tetrachloride	0.1	~~0~~	0.2	~~0~~	0.4	~~0.3715526~~	1	0.4856634	2	0.4870365	5	0.491061
Chlorobenzene	0.1	~~0~~	0.2	0.7987904	0.4	0.8280098	1	0.8437393	2	0.8650244	5	0.8565625
Chloroethane	0.1	~~0~~	0.2	~~0~~	0.4	~~0~~	1	0.2139652	2	0.2310255	5	0.2058599
Chloroform	0.1	~~0~~	0.2	~~0~~	0.4	0.8488503	1	0.8516194	2	0.8904258	5	0.8730871
Chloromethane	0.1	~~1.341028~~	0.2	~~0.9813749~~	0.4	0.8084013	1	0.6727651	2	0.6527617	5	0.6121159
2-Chlorotoluene	0.1	~~0~~	0.2	~~0~~	0.4	0.6546503	1	0.6356747	2	0.6679739	5	0.6649508
4-Chlorotoluene	0.1	~~0~~	0.2	2.188061	0.4	1.942724	1	2.111936	2	2.047573	5	2.065801
Dibromochloromethane	0.1	~~0~~	0.2	~~0~~	0.4	~~0.219122~~	1	0.2377542	2	0.2474023	5	0.2631314
1,2-Dibromo-3-chloropropane	0.1	~~0~~	0.2	~~0~~	0.4	~~0~~	1	~~0.1386677~~	2	0.1726699	5	0.1698804
1,2-Dibromoethane (EDB)	0.1	~~0~~	0.2	0.2353579	0.4	0.2970752	1	0.312646	2	0.3287719	5	0.3370387
Dibromomethane	0.1	~~0~~	0.2	~~0~~	0.4	0.2502057	1	0.3075161	2	0.3292777	5	0.328245
1,2-Dichlorobenzene	0.1	~~0~~	0.2	1.204133	0.4	1.209108	1	1.322835	2	1.274695	5	1.282376
1,3-Dichlorobenzene	0.1	~~0~~	0.2	1.261805	0.4	1.259204	1	1.340683	2	1.326091	5	1.312471
1,4-Dichlorobenzene	0.1	~~0~~	0.2	1.328216	0.4	1.349208	1	1.383588	2	1.387872	5	1.37307
Dichlorodifluoromethane	0.1	~~0~~	0.2	~~0~~	0.4	0.4131572	1	0.4510236	2	0.5082802	5	0.5096374
1,1-Dichloroethane	0.1	~~0~~	0.2	~~0~~	0.4	0.7396381	1	0.8332391	2	0.8833044	5	0.8524204
1,2-Dichloroethane (EDC)	0.1	~~0~~	0.2	~~0~~	0.4	0.6003781	1	0.6935019	2	0.6881276	5	0.6800074
1,1-Dichloroethene	0.1	~~0~~	0.2	0.5314809	0.4	0.6223361	1	0.6444878	2	0.6896968	5	0.6705055

INITIAL CALIBRATION DATA

EPA 8260C

Laboratory: Apex Laboratories

SDG: A9F0692

Client: Hahn and Associates

Project: Mult 802 Decommissioning

Calibration: A9F2102

Instrument: VOA-GCMS9

Calibration Date: 06/21/19 11:39

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF
cis-1,2-Dichloroethene	0.1	~~0~~	0.2	~~0~~	0.4	0.6616294	1	0.6666384	2	0.7063538	5	0.6753039
trans-1,2-Dichloroethene	0.1	~~0~~	0.2	~~0~~	0.4	0.5963332	1	0.610555	2	0.6577105	5	0.6429973
1,2-Dichloropropane	0.1	~~0~~	0.2	~~0~~	0.4	0.4692079	1	0.5170041	2	0.5231267	5	0.529734
1,3-Dichloropropane	0.1	~~0~~	0.2	~~0~~	0.4	0.4925398	1	0.5502445	2	0.5586633	5	0.5609334
2,2-Dichloropropane	0.1	~~0~~	0.2	~~0~~	0.4	~~0~~	1	0.6539136	2	0.6685738	5	0.6465605
1,1-Dichloropropene	0.1	~~0~~	0.2	~~0~~	0.4	0.6367822	1	0.6367115	2	0.6556586	5	0.6554924
cis-1,3-Dichloropropene	0.1	~~0~~	0.2	~~0~~	0.4	0.4254458	1	0.4708374	2	0.4949652	5	0.4881912
trans-1,3-Dichloropropene	0.1	~~0~~	0.2	~~0~~	0.4	0.4060544	1	0.4203905	2	0.41962	5	0.4360121
Ethylbenzene	0.1	1.356434	0.2	1.552411	0.4	1.405096	1	1.437735	2	1.439753	5	1.468699
Hexachlorobutadiene	0.1	~~0~~	0.2	~~0~~	0.4	~~0~~	1	0.149308	2	0.1643973	5	0.1707656
n-Hexane	0.1	~~0~~	0.2	~~0~~	0.4	~~0~~	1	7.587754E-02	2	7.966396E-02	5	8.718044E-02
2-Hexanone	0.2	~~0~~	0.4	~~0~~	0.8	0.3876327	2	0.3700993	4	0.3583718	10	0.3533978
Isopropylbenzene	0.1	~~0~~	0.2	1.263167	0.4	1.22941	1	1.249494	2	1.311794	5	1.309485
4-Isopropyltoluene	0.1	~~0~~	0.2	1.987081	0.4	1.976687	1	2.076926	2	2.148605	5	2.182027
Methylene chloride	0.1	11.61839	0.2	4.431339	0.4	2.183088	1	1.194247	2	0.8761829	5	0.6167719
4-Methyl-2-pentanone (MiBK)	0.2	~~0~~	0.4	~~0~~	0.8	~~0.5156155~~	2	~~0.5124093~~	4	0.4950455	10	0.5008817
Methyl tert-butyl ether (MTBE)	0.1	~~0~~	0.2	~~0~~	0.4	1.521459	1	1.586595	2	1.554171	5	1.605593
Naphthalene	0.1	~~0~~	0.2	~~0~~	0.4	2.160091	1	2.065599	2	2.174303	5	2.285998
n-Propylbenzene	0.1	~~0~~	0.2	3.23141	0.4	3.057582	1	3.325622	2	3.305195	5	3.302966
Styrene	0.1	~~0~~	0.2	0.7908658	0.4	0.7376462	1	0.7985862	2	0.8253436	5	0.8496662
1,1,1,2-Tetrachloroethane	0.1	~~0~~	0.2	~~0.1783014~~	0.4	0.2039968	1	0.2105066	2	0.2526234	5	0.2474808
1,1,2,2-Tetrachloroethane	0.1	~~0~~	0.2	0.5714825	0.4	0.6003084	1	0.6373909	2	0.6466761	5	0.662772
Tetrachloroethene (PCE)	0.1	~~0~~	0.2	~~0~~	0.4	0.2722543	1	0.3205867	2	0.3196951	5	0.316822
Tetrahydrofuran	0.1	~~0~~	0.2	~~0~~	0.4	~~0~~	1	~~0~~	2	0.3073098	5	0.2859138
1,2,3-Trichlorobenzene	0.1	~~0~~	0.2	~~0~~	0.4	0.5680429	1	0.6802955	2	0.6957841	5	0.6846964
1,2,4-Trichlorobenzene	0.1	~~0~~	0.2	~~0~~	0.4	0.5485137	1	0.6833846	2	0.7028247	5	0.7041016
1,1,1-Trichloroethane	0.1	~~0~~	0.2	~~0~~	0.4	0.6281146	1	0.7074049	2	0.6775058	5	0.685091
1,1,2-Trichloroethane	0.1	~~0~~	0.2	~~0~~	0.4	0.266049	1	0.2880453	2	0.3151166	5	0.3080678
Trichloroethene (TCE)	0.1	~~0~~	0.2	~~0~~	0.4	0.4449385	1	0.4934396	2	0.4793115	5	0.4903484
Trichlorofluoromethane	0.1	~~0~~	0.2	~~0~~	0.4	0.5749531	1	0.6553275	2	0.6574691	5	0.6519766
1,2,3-Trichloropropane	0.1	~~0~~	0.2	~~0~~	0.4	0.2063295	1	0.2944972	2	0.3046806	5	0.3035379

INITIAL CALIBRATION DATA

EPA 8260C

Laboratory: Apex Laboratories

Client: Hahn and Associates

Calibration: A9F2102

SDG: A9F0692

Project: Mult 802 Decommissioning

Instrument: VOA-GCMS9

Calibration Date: 06/21/19 11:39

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF
1,1,2-Trichloro-1,2,2-trifluoroethan	0.1	0	0.2	0	0.4	0	1	0.3963541	2	0.4301854	5	0.4206991
1,2,4-Trimethylbenzene	0.1	0	0.2	2.200295	0.4	2.007255	1	2.243053	2	2.225523	5	2.229076
1,3,5-Trimethylbenzene	0.1	0	0.2	2.236996	0.4	2.149053	1	2.203924	2	2.142093	5	2.21614
Isobutyl alcohol	2.5	0	5	0	10	0	25	0	50	0	125	0.0393685
Toluene	0.1	1.616143	0.2	1.513581	0.4	1.415955	1	1.364401	2	1.377099	5	1.328316
Vinyl chloride	0.1	0	0.2	0.5850952	0.4	0.5859321	1	0.5393903	2	0.5594583	5	0.5698322
m,p-Xylene	0.2	1.055265	0.4	1.168072	0.8	1.044999	2	1.072774	4	1.078128	10	1.087968
o-Xylene	0.1	1.099854	0.2	1.08645	0.4	1.035885	1	1.089746	2	1.136765	5	1.109271
trans-1,4-Dichloro-2-butene	0.1	0	0.2	0	0.4	0.1851021	1	0.2292822	2	0.2191377	5	0.248114
Xylenes, total	0.3	1.070128	0.6	1.140865	1.2	1.041961	3	1.078431	6	1.097674	15	1.095069
1,4-Difluorobenzene (Surr)	50	1.656433	50	1.643684	50	1.638224	50	1.679354	50	1.673643	50	1.669289
Toluene-d8 (Surr)	50	1.313776	50	1.320106	50	1.309213	50	1.300308	50	1.313828	50	1.302321
4-Bromofluorobenzene (Surr)	50	0.8463302	50	0.8385169	50	0.8382988	50	0.836379	50	0.8342228	50	0.833238

INITIAL CALIBRATION DATA (Continued)

EPA 8260C

Laboratory: Apex Laboratories
SDG: A9F0692
Client: Hahn and Associates
Project: Mult 802 Decommissioning
Calibration: A9F2102
Instrument: VOA-GCMS9
Matrix:
Calibration Date: 06/21/19 11:39

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF
Acetone	20	0.2502252	40	0.2295738	100	0.241499	200	0.2153329	400	0.2200987		
Acrylonitrile	10	0.2791702	20	0.2842038	50	0.3082136	100	0.2770949	200	0.2840694		
Benzene	10	2.132941	20	2.099218	50	2.192502	100	2.022155	200	2.083045		
Bromobenzene	10	0.8198859	20	0.7876804	50	0.8130691	100	0.7444806	200	0.7725486		
Bromochloromethane	10	0.3483457	20	0.3471845	50	0.374815	100	0.3259103	200	0.3088905		
Bromodichloromethane	10	0.6254553	20	0.6328047	50	0.695563	100	0.6498006	200	0.6918943		
Bromoform	10	0.1733539	20	0.1916882	50	0.2304545	100	~~0.2243493~~	200	~~0.2451645~~		
Bromomethane	10	0.3062462	20	0.2995713	50	0.289429	100	0.265063	200	0.2730594		
2-Butanone (MEK)	20	0.4001256	40	0.4023398	100	0.423399	200	0.3761216	400	0.3877289		
n-Butylbenzene	10	2.208458	20	2.193297	50	2.308636	100	2.16355	200	2.251039		
sec-Butylbenzene	10	3.023718	20	2.947149	50	3.069135	100	2.852505	200	2.947656		
tert-Butylbenzene	10	1.397371	20	1.367829	50	1.428861	100	1.323966	200	1.375165		
Carbon disulfide	10	1.273314	20	1.252024	50	1.303326	100	1.189766	200	1.220532		
Carbon tetrachloride	10	0.5452097	20	0.5542677	50	0.6131423	100	0.5840346	200	0.631957		
Chlorobenzene	10	0.9116121	20	0.8913598	50	0.9314644	100	0.8619957	200	0.8839233		
Chloroethane	10	0.2101624	20	0.201583	50	0.2043922	100	~~9.548295E-02~~	200	~~8.916582E-02~~		
Chloroform	10	0.9256632	20	0.9169614	50	0.9722756	100	0.8877222	200	0.9143711		
Chloromethane	10	0.6520281	20	0.6355548	50	0.6709563	100	0.6235518	200	0.6129561		
2-Chlorotoluene	10	0.7324894	20	0.7108172	50	0.7336271	100	0.6821609	200	0.7046527		
4-Chlorotoluene	10	2.255721	20	2.191293	50	2.269798	100	2.080621	200	2.158888		
Dibromochloromethane	10	0.2881848	20	0.2985465	50	0.3417908	100	0.329668	200	0.3539263		
1,2-Dibromo-3-chloropropane	10	0.1964596	20	0.2040288	50	0.2326117	100	0.2124241	200	0.2311058		
1,2-Dibromoethane (EDB)	10	0.3601622	20	0.3560646	50	0.3809336	100	0.3475514	200	0.3577217		
Dibromomethane	10	0.3486333	20	0.3490258	50	0.3740872	100	0.342833	200	0.3569767		
1,2-Dichlorobenzene	10	1.381408	20	1.343696	50	1.409342	100	1.253343	200	1.308693		
1,3-Dichlorobenzene	10	1.419246	20	1.381027	50	1.426471	100	1.317766	200	1.365855		
1,4-Dichlorobenzene	10	1.435105	20	1.403694	50	1.458879	100	1.342292	200	1.38258		
Dichlorodifluoromethane	10	0.5479652	20	0.5351587	50	0.5922679	100	0.5633276	200	0.5456266		
1,1-Dichloroethane	10	0.923339	20	0.8959875	50	0.9479344	100	0.8614991	200	0.8897189		
1,2-Dichloroethane (EDC)	10	0.7123859	20	0.7016161	50	0.7460894	100	0.6778811	200	0.6975088		
1,1-Dichloroethene	10	0.7231205	20	0.7192143	50	0.7517297	100	0.6931068	200	0.7114706		

INITIAL CALIBRATION DATA (Continued)

EPA 8260C

Laboratory: Apex Laboratories
SDG: A9F0692
Client: Hahn and Associates
Project: Mult 802 Decommissioning
Calibration: A9F2102
Instrument: VOA-GCMS9
Matrix:
Calibration Date: 06/21/19 11:39

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF
cis-1,2-Dichloroethene	10	0.7241508	20	0.7228732	50	0.7630545	100	0.698423	200	0.720736		
trans-1,2-Dichloroethene	10	0.6970988	20	0.6810317	50	0.7217433	100	0.6579597	200	0.67454		
1,2-Dichloropropane	10	0.5569986	20	0.5523674	50	0.576301	100	0.5325459	200	0.5503891		
1,3-Dichloropropane	10	0.5826439	20	0.5734695	50	0.6112845	100	0.5508993	200	0.5658174		
2,2-Dichloropropane	10	0.7015076	20	0.6917724	50	0.7296456	100	0.6635898	200	0.6791678		
1,1-Dichloropropene	10	0.7049101	20	0.7151659	50	0.743493	100	0.6821164	200	0.7092264		
cis-1,3-Dichloropropene	10	0.5372517	20	0.5281833	50	0.5802182	100	0.5361369	200	0.5612167		
trans-1,3-Dichloropropene	10	0.482933	20	0.490118	50	0.5450764	100	0.5027907	200	0.529495		
Ethylbenzene	10	1.570988	20	1.54878	50	1.620157	100	1.493324	200	1.538597		
Hexachlorobutadiene	10	0.2026153	20	0.2048924	50	0.2115201	100	0.1939619	200	0.2005842		
n-Hexane	10	0.0973777	20	9.782306E-02	50	0.1047212	100	9.549457E-02	200	9.911925E-02		
2-Hexanone	20	0.3813544	40	0.371588	100	0.3988266	200	0.3455015	400	0.3472402		
Isopropylbenzene	10	1.456432	20	1.428943	50	1.505144	100	1.39924	200	1.43255		
4-Isopropyltoluene	10	2.407943	20	2.37725	50	2.531817	100	2.365821	200	2.460436		
Methylene chloride	10	0.5585081	20	0.517289	50	0.5246387	100	0.4748694	200	0.4844981		
4-Methyl-2-pentanone (MiBK)	20	0.5141917	40	0.5103722	100	0.5417066	200	0.4713766	400	0.4668649		
Methyl tert-butyl ether (MTBE)	10	1.646316	20	1.647648	50	1.747678	100	1.597996	200	1.63511		
Naphthalene	10	2.527057	20	2.570329	50	2.786788	100	2.660043	200	2.764875		
n-Propylbenzene	10	3.6573	20	3.533229	50	3.664306	100	3.406275	200	3.548718		
Styrene	10	0.9474149	20	0.9376887	50	1.005697	100	0.922154	200	0.9484929		
1,1,1,2-Tetrachloroethane	10	0.2772531	20	0.2806732	50	0.3086527	100	0.2926335	200	0.3093987		
1,1,2,2-Tetrachloroethane	10	0.6972595	20	0.6674238	50	0.7055404	100	0.605453	200	0.6255128		
Tetrachloroethene (PCE)	10	0.3432149	20	0.3371253	50	0.3461349	100	0.3227593	200	0.3373427		
Tetrahydrofuran	10	0.2841541	20	0.2710671	50	0.294376	100	0.2618947	200	0.2674693		
1,2,3-Trichlorobenzene	10	0.7570077	20	0.7608589	50	0.809087	100	0.7600329	200	0.8123019		
1,2,4-Trichlorobenzene	10	0.7979064	20	0.7986306	50	0.8515424	100	0.798273	200	0.8391437		
1,1,1-Trichloroethane	10	0.7350052	20	0.7425724	50	0.7850304	100	0.7244509	200	0.7556036		
1,1,2-Trichloroethane	10	0.3362452	20	0.3293364	50	0.3470122	100	0.3180969	200	0.3236156		
Trichloroethene (TCE)	10	0.5324864	20	0.5253976	50	0.5437871	100	0.5062716	200	0.5252925		
Trichlorofluoromethane	10	0.7087199	20	0.6872755	50	0.7235972	100	0.6890249	200	0.6595548		
1,2,3-Trichloropropane	10	0.3251026	20	0.3107279	50	0.3229114	100	0.2891764	200	0.2961262		

INITIAL CALIBRATION DATA (Continued)

EPA 8260C

Laboratory: Apex Laboratories
SDG: A9F0692
Client: Hahn and Associates
Project: Mult 802 Decommissioning
Calibration: A9F2102
Instrument: VOA-GCMS9
Matrix:
Calibration Date: 06/21/19 11:39

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF
1,1,2-Trichloro-1,2,2-trifluoroethan	10	0.4562663	20	0.4510153	50	0.4736402	100	0.4310006	200	0.4519689		
1,2,4-Trimethylbenzene	10	2.469535	20	2.407021	50	2.512424	100	2.331146	200	2.435826		
1,3,5-Trimethylbenzene	10	2.455937	20	2.380053	50	2.4852	100	2.324529	200	2.408334		
Isobutyl alcohol	250	4.083921E-02	500	0.0414275	1250	0.0460315	2500	3.980446E-02	5000	4.080729E-02		
Toluene	10	1.452567	20	1.41724	50	1.468882	100	1.34679	200	1.387789		
Vinyl chloride	10	0.6211183	20	0.6084552	50	0.6485083	100	0.6220804	200	0.6071763		
m,p-Xylene	20	1.180578	40	1.156938	100	1.231861	200	1.137445	400	1.164618		
o-Xylene	10	1.224749	20	1.198785	50	1.274994	100	1.169697	200	1.191671		
trans-1,4-Dichloro-2-butene	10	0.2659456	20	0.2677093	50	0.2923691	100	0.2591346	200	0.2722175		
Xylenes, total	30	1.195301	60	1.170887	150	1.246238	300	1.148196	600	1.173635		
1,4-Difluorobenzene (Surr)	50	1.660515	50	1.664068	50	1.676449	50	1.667242	50	1.676907		
Toluene-d8 (Surr)	50	1.313661	50	1.29582	50	1.311679	50	1.2857	50	1.304042		
4-Bromofluorobenzene (Surr)	50	0.8392919	50	0.8238453	50	0.8132616	50	0.8089132	50	0.7999919		

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8260C

Laboratory:	Apex Laboratories	SDG:	A9F0692
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Instrument ID:	VOA-GCMS9	Calibration:	A9F2102
Lab File ID:	VI19062035.D		
Sequence:	9F20044	Inject Date:	06/21/19
Lab Sample ID:	9F20044-ICV1	Inject Time:	01:01

ANALYTE	EXPECTED (ng/mL)	FOUND (ng/mL)	% DRIFT	QC LIMIT
Acetone	40.0	39.0	-2.5	70 - 130
Acrylonitrile	20.0	20.5	2.5	70 - 130
Benzene	20.0	20.4	1.9	70 - 130
Bromobenzene	20.0	20.7	3.7	70 - 130
Bromochloromethane	20.0	22.0	10.0	70 - 130
Bromodichloromethane	20.0	21.3	6.4	70 - 130
Bromoform	20.0	21.1	5.4	70 - 130
Bromomethane	20.0	19.3	-3.6	70 - 130
2-Butanone (MEK)	40.0	39.5	-1.2	70 - 130
n-Butylbenzene	20.0	21.1	5.4	70 - 130
sec-Butylbenzene	20.0	20.7	3.6	70 - 130
tert-Butylbenzene	20.0	20.7	3.3	70 - 130
Carbon disulfide	20.0	22.1	10.4	70 - 130
Carbon tetrachloride	20.0	20.7	3.3	70 - 130
Chlorobenzene	20.0	21.1	5.7	70 - 130
Chloroethane	20.0	19.3	-3.7	70 - 130
Chloroform	20.0	20.7	3.7	70 - 130
Chloromethane	20.0	20.4	2.2	70 - 130
2-Chlorotoluene	20.0	20.9	4.3	70 - 130
4-Chlorotoluene	20.0	20.8	4.0	70 - 130
Dibromochloromethane	20.0	21.2	6.0	70 - 130
1,2-Dibromo-3-chloropropane	20.0	21.0	4.9	70 - 130
1,2-Dibromoethane (EDB)	20.0	21.5	7.6	70 - 130
Dibromomethane	20.0	21.2	6.0	70 - 130
1,2-Dichlorobenzene	20.0	21.0	5.0	70 - 130
1,3-Dichlorobenzene	20.0	21.2	5.9	70 - 130
1,4-Dichlorobenzene	20.0	20.6	2.9	70 - 130
Dichlorodifluoromethane	20.0	22.7	13.3	70 - 130
1,1-Dichloroethane	20.0	22.0	9.9	70 - 130
1,2-Dichloroethane (EDC)	20.0	21.2	6.1	70 - 130
1,1-Dichloroethene	20.0	21.0	5.1	70 - 130

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8260C

Laboratory:	Apex Laboratories	SDG:	A9F0692
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Instrument ID:	VOA-GCMS9	Calibration:	A9F2102
Lab File ID:	VI19062035.D		
Sequence:	9F20044	Inject Date:	06/21/19
Lab Sample ID:	9F20044-ICV1	Inject Time:	01:01

ANALYTE	EXPECTED (ng/mL)	FOUND (ng/mL)	% DRIFT	QC LIMIT
cis-1,2-Dichloroethene	20.0	20.7	3.7	70 - 130
trans-1,2-Dichloroethene	20.0	21.7	8.3	70 - 130
1,2-Dichloropropane	20.0	21.0	4.9	70 - 130
1,3-Dichloropropane	20.0	20.7	3.5	70 - 130
2,2-Dichloropropane	20.0	19.0	-5.2	70 - 130
1,1-Dichloropropene	20.0	20.7	3.5	70 - 130
cis-1,3-Dichloropropene	20.0	21.0	4.8	70 - 130
trans-1,3-Dichloropropene	20.0	21.7	8.4	70 - 130
Ethylbenzene	20.0	20.9	4.3	70 - 130
Hexachlorobutadiene	20.0	21.4	7.0	70 - 130
2-Hexanone	40.0	40.7	1.8	70 - 130
Isopropylbenzene	20.0	20.9	4.4	70 - 130
4-Isopropyltoluene	20.0	21.3	6.6	70 - 130
Methylene chloride	20.0	20.5	2.7	70 - 130
4-Methyl-2-pentanone (MiBK)	40.0	40.9	2.3	70 - 130
Methyl tert-butyl ether (MTBE)	20.0	20.3	1.5	70 - 130
Naphthalene	20.0	21.2	5.9	70 - 130
n-Propylbenzene	20.0	20.6	3.1	70 - 130
Styrene	20.0	21.4	7.1	70 - 130
1,1,1,2-Tetrachloroethane	20.0	21.6	8.2	70 - 130
1,1,2,2-Tetrachloroethane	20.0	20.5	2.5	70 - 130
Tetrachloroethene (PCE)	20.0	20.8	4.2	70 - 130
1,2,3-Trichlorobenzene	20.0	21.1	5.5	70 - 130
1,2,4-Trichlorobenzene	20.0	21.2	6.0	70 - 130
1,1,1-Trichloroethane	20.0	21.3	6.7	70 - 130
1,1,2-Trichloroethane	20.0	21.5	7.3	70 - 130
Trichloroethene (TCE)	20.0	21.0	4.9	70 - 130
Trichlorofluoromethane	20.0	19.8	-1.1	70 - 130
1,2,3-Trichloropropane	20.0	21.4	7.0	70 - 130
1,2,4-Trimethylbenzene	20.0	20.8	4.2	70 - 130
1,3,5-Trimethylbenzene	20.0	20.7	3.7	70 - 130

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8260C

Laboratory:	Apex Laboratories	SDG:	A9F0692
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Instrument ID:	VOA-GCMS9	Calibration:	A9F2102
Lab File ID:	VI19062035.D		
Sequence:	9F20044	Inject Date:	06/21/19
Lab Sample ID:	9F20044-ICV1	Inject Time:	01:01

ANALYTE	EXPECTED (ng/mL)	FOUND (ng/mL)	% DRIFT	QC LIMIT
Toluene	20.0	19.8	-1.1	70 - 130
Vinyl chloride	20.0	20.2	0.9	70 - 130
m,p-Xylene	40.0	42.0	4.9	70 - 130
o-Xylene	20.0	21.0	5.2	70 - 130
1,4-Difluorobenzene (Surr)	50.0	50.4	0.8	70 - 130
Toluene-d8 (Surr)	50.0	49.7	-0.5	70 - 130
4-Bromofluorobenzene (Surr)	50.0	49.2	-1.7	70 - 130

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA 8260C

Laboratory:	Apex Laboratories	SDG:	A9F0692
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9F20044	Instrument:	VOA-GCMS9
Matrix:	Water	Calibration:	A9F2102

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Initial Cal Check (9F20044-ICV1)				Lab File ID: VI19062035.D		Analyzed: 06/21/19 01:01		
1,4-Difluorobenzene (Surr)	50.0	101	70 - 130	6.789	6.788455	0.0005	+/-1.0	
Toluene-d8 (Surr)	50.0	99	70 - 130	8.304	8.303636	0.0004	+/-1.0	
4-Bromofluorobenzene (Surr)	50.0	98	70 - 130	10.974	10.98	-0.0060	+/-1.0	
Initial Cal Check (9F20044-ICV2)				Lab File ID: VI19062036.D		Analyzed: 06/21/19 01:28		
1,4-Difluorobenzene (Surr)	50.0	100	70 - 130	6.789	6.788455	0.0005	+/-1.0	
Toluene-d8 (Surr)	50.0	100	70 - 130	8.303	8.303636	-0.0006	+/-1.0	
4-Bromofluorobenzene (Surr)	50.0	103	70 - 130	10.98	10.98	0.0000	+/-1.0	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA 8260C

Laboratory:	Apex Laboratories	SDG:	A9F0692
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9F24026	Instrument:	VOA-GCMS9
Matrix:	Water	Calibration:	A9F2102

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
LCS (9061200-BS1)			Lab File ID: VI19062403.D		Analyzed: 06/24/19 09:27			
1,4-Difluorobenzene (Surr)	50.0	101	80 - 120	6.789	6.788455	0.0005	+/-1.0	
Toluene-d8 (Surr)	50.0	100	80 - 120	8.303	8.303636	-0.0006	+/-1.0	
4-Bromofluorobenzene (Surr)	50.0	97	80 - 120	10.98	10.98	0.0000	+/-1.0	
Blank (9061200-BLK1)			Lab File ID: VI19062405.D		Analyzed: 06/24/19 10:21			
1,4-Difluorobenzene (Surr)	50.0	101	80 - 120	6.789	6.788455	0.0005	+/-1.0	
Toluene-d8 (Surr)	50.0	101	80 - 120	8.304	8.303636	0.0004	+/-1.0	
4-Bromofluorobenzene (Surr)	50.0	100	80 - 120	10.98	10.98	0.0000	+/-1.0	
2708-190620-MULT802-TB (A9F0692-01)			Lab File ID: VI19062406.D		Analyzed: 06/24/19 10:48			
1,4-Difluorobenzene (Surr)	50.0	102	80 - 120	6.789	6.788455	0.0005	+/-1.0	
Toluene-d8 (Surr)	50.0	102	80 - 120	8.303	8.303636	-0.0006	+/-1.0	
4-Bromofluorobenzene (Surr)	50.0	101	80 - 120	10.98	10.98	0.0000	+/-1.0	
2708-190620-MULT802-107 (A9F0692-02)			Lab File ID: VI19062407.D		Analyzed: 06/24/19 11:15			
1,4-Difluorobenzene (Surr)	50.0	102	80 - 120	6.789	6.788455	0.0005	+/-1.0	
Toluene-d8 (Surr)	50.0	102	80 - 120	8.303	8.303636	-0.0006	+/-1.0	
4-Bromofluorobenzene (Surr)	50.0	100	80 - 120	10.98	10.98	0.0000	+/-1.0	
2708-190620-MULT802-108 (A9F0692-03RE1)			Lab File ID: VI19062425.D		Analyzed: 06/24/19 19:22			
1,4-Difluorobenzene (Surr)	50.0	101	80 - 120	6.789	6.788455	0.0005	+/-1.0	
Toluene-d8 (Surr)	50.0	101	80 - 120	8.303	8.303636	-0.0006	+/-1.0	
4-Bromofluorobenzene (Surr)	50.0	97	80 - 120	10.98	10.98	0.0000	+/-1.0	

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8260C

Laboratory:	Apex Laboratories	SDG:	A9F0692
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9F24026	Instrument:	VOA-GCMS9
Matrix:	Water	Calibration:	A9F2102

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS (9061200-BS1)			Lab File ID: VI19062403.D			Analyzed: 06/24/19 09:27			
Pentafluorobenzene (ISTD)	192815	6.223	192815	6.223	100	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (ISTD)	295428	9.916	295428	9.916	100	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	144113	11.856	144113	11.856	100	50 - 200	0.0000	+/-0.50	
Calibration Check (9F24026-CCV1)			Lab File ID: VI19062403.D			Analyzed: 06/24/19 09:27			
Pentafluorobenzene (ISTD)	192815	6.223	211811	6.223	91	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (ISTD)	295428	9.916	321290	9.916	92	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	144113	11.856	153422	11.856	94	50 - 200	0.0000	+/-0.50	
Blank (9061200-BLK1)			Lab File ID: VI19062405.D			Analyzed: 06/24/19 10:21			
Pentafluorobenzene (ISTD)	184427	6.223	192815	6.223	96	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (ISTD)	276933	9.916	295428	9.916	94	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	123478	11.856	144113	11.856	86	50 - 200	0.0000	+/-0.50	
2708-190620-MULT802-TB (A9F0692-01)			Lab File ID: VI19062406.D			Analyzed: 06/24/19 10:48			
Pentafluorobenzene (ISTD)	167630	6.223	192815	6.223	87	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (ISTD)	247956	9.916	295428	9.916	84	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	111412	11.856	144113	11.856	77	50 - 200	0.0000	+/-0.50	
2708-190620-MULT802-107 (A9F0692-02)			Lab File ID: VI19062407.D			Analyzed: 06/24/19 11:15			
Pentafluorobenzene (ISTD)	174524	6.223	192815	6.223	91	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (ISTD)	260097	9.916	295428	9.916	88	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	118113	11.856	144113	11.856	82	50 - 200	0.0000	+/-0.50	
Duplicate (9061200-DUP1)			Lab File ID: VI19062416.D			Analyzed: 06/24/19 15:19			
Pentafluorobenzene (ISTD)	160904	6.223	192815	6.223	83	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (ISTD)	243046	9.916	295428	9.916	82	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	108513	11.856	144113	11.856	75	50 - 200	0.0000	+/-0.50	
2708-190620-MULT802-108 (A9F0692-03RE1)			Lab File ID: VI19062425.D			Analyzed: 06/24/19 19:22			
Pentafluorobenzene (ISTD)	150858	6.223	192815	6.223	78	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (ISTD)	226275	9.916	295428	9.916	77	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	105684	11.856	144113	11.856	73	50 - 200	0.0000	+/-0.50	
Matrix Spike (9061200-MS1)			Lab File ID: VI19062428.D			Analyzed: 06/24/19 20:43			
Pentafluorobenzene (ISTD)	141092	6.223	192815	6.223	73	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (ISTD)	218960	9.916	295428	9.916	74	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	104485	11.856	144113	11.856	73	50 - 200	0.0000	+/-0.50	

HOLDING TIME SUMMARY

EPA 8260C

Laboratory: Apex Laboratories SDG: A9F0692

Client: Hahn and Associates Project: Mult 802 Decommissioning

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
2708-190620-MULT802-TB	06/20/19 14:00	06/21/19 11:37	06/24/19 10:27	3.85	14.00	06/24/19 10:48	3.87	14.00	
2708-190620-MULT802-107	06/20/19 14:30	06/21/19 11:37	06/24/19 10:27	3.83	14.00	06/24/19 11:15	3.86	14.00	
2708-190620-MULT802-108	06/20/19 16:10	06/21/19 11:37	06/24/19 10:27	3.76	14.00	06/24/19 19:22	4.13	14.00	

Raw Data

ELEMENT SEQUENCE LOG

Apex Laboratories

Sequence:	9F24026	Instrument:	VOA-GCMS9
Date:	06/24/19 08:11	Calibration:	A9F2102

#	Lab Number	Matrix	Analysis	Client	Due	Batch	ISTD ID	STD ID
1	9F24026-IBL1	Water	QC	QC			A19C125	
2	9F24026-TUN1	Water	QC	QC			A19C125	
3	9F24026-CCV1	Water	QC	QC			A19C125	
4	9061200-BS1	Water	QC	QC		9061200	A19C125	
5	9F24026-CCV2	Water	QC	QC			A19C125	
6	9061200-BS2	Water	QC	QC		9061200	A19C125	
7	9061200-BLK1	Water	QC	QC		9061200	A19C125	
8	A9F0692-01	Water	8260C Full List	Hahn and Associates	07/05/19	9061200	A19C125	
9	A9F0692-02	Water	8260C Full List	Hahn and Associates	06/25/19	9061200	A19C125	
10	A9F0692-03	Water	8260C Full List	Hahn and Associates	06/25/19	9061200	A19C125	
11	A9F0705-02	Water	8260C RBDM List		06/25/19	9061200	A19C125	
"	"	Water	NWTPH-Gx		06/25/19	9061200	A19C125	
12	A9F0705-01	Water	8260C RBDM List		06/25/19	9061200	A19C125	
"	"	Water	NWTPH-Gx		06/25/19	9061200	A19C125	
13	A9F0705-03	Water	8260C RBDM List		06/25/19	9061200	A19C125	
"	"	Water	NWTPH-Gx		06/25/19	9061200	A19C125	
14	A9F0705-04	Water	8260C RBDM List		06/25/19	9061200	A19C125	
"	"	Water	NWTPH-Gx		06/25/19	9061200	A19C125	
15	A9F0663-01RE1	Water	624 Volatiles		06/27/19	9061200	A19C125	
16	9F24026-IBL2	Water	QC	QC			A19C125	
17	A9F0709-01	Water	8260C Full List		07/05/19	9061200	A19C125	
"	"	Water	624 Volatiles	(QC Source)		9061200	A19C125	
"	"	Water	8260C Halogenated VOCs	(QC Source)		9061200	A19C125	
"	"	Water	8260C RBDM List	(QC Source)		9061200	A19C125	
"	"	Water	NWTPH-Gx	(QC Source)		9061200	A19C125	
18	9061200-DUP1	Water	QC	QC		9061200	A19C125	
19	A9F0709-02	Water	8260C Full List		07/05/19	9061200	A19C125	
20	A9F0709-03	Water	8260C Full List		07/05/19	9061200	A19C125	
21	A9F0709-04	Water	8260C Full List		07/05/19	9061200	A19C125	
22	A9F0709-05	Water	8260C Full List		07/05/19	9061200	A19C125	
23	A9F0709-06	Water	8260C Full List		07/05/19	9061200	A19C125	
24	A9F0709-07	Water	8260C Full List		07/05/19	9061200	A19C125	
25	A9F0709-08	Water	8260C Full List		07/05/19	9061200	A19C125	
26	A9F0705-02RE1	Water	8260C RBDM List		06/25/19	9061200	A19C125	
"	"	Water	NWTPH-Gx		06/25/19	9061200	A19C125	
27	A9F0692-03RE1	Water	8260C Full List	Hahn and Associates	06/25/19	9061200	A19C125	
28	A9F0642-07RE1	Water	8260C Halogenated VOCs		07/02/19	9061200	A19C125	
29	A9F0709-12	Water	8260C Full List		07/05/19	9061200	A19C125	
"	"	Water	624 Volatiles	(QC Source)		9061200	A19C125	
"	"	Water	8260C Halogenated VOCs	(QC Source)		9061200	A19C125	
"	"	Water	8260C RBDM List	(QC Source)		9061200	A19C125	
"	"	Water	NWTPH-Gx	(QC Source)		9061200	A19C125	
30	9061200-MS1	Water	QC	QC		9061200	A19C125	
31	9F24026-IBL3	Water	QC	QC			A19C125	
32	9F24026-IBL4	Water	QC	QC			A19C125	
33	9F24026-IBL5	Water	QC	QC			A19C125	

Sequence:	9F24026	Instrument:	VOA-GCMS9
Date:	06/24/19 08:11	Calibration:	A9F2102

#	Lab Number	Matrix	Analysis	Client	Due	Batch	ISTD ID	STD ID

Data Entered By: 6/25/19 [illegible]

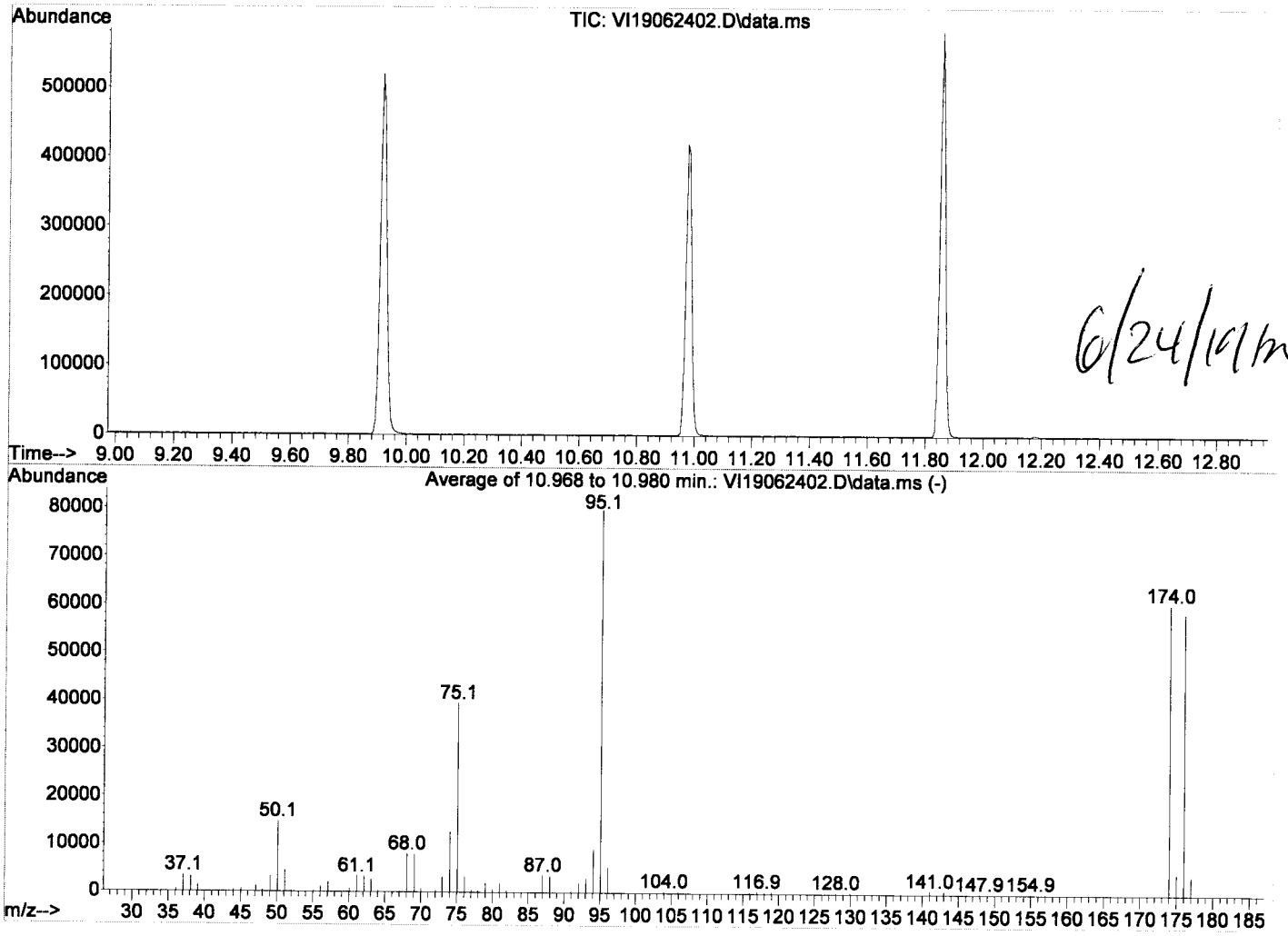
Data Reviewed By: [illegible] 10/25/19

Comments: A9F0663-01BKR 624 → BTEX only

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062402.D
Acq On : 24 Jun 2019 9:00 am
Operator : TNL
Sample : 9F24026-TUN1
Misc : A19C125 5mL BFB IS/SURR
ALS Vial : 2 Sample Multiplier: 1

Integration File: RTEINT.P

Method : C:\msdchem\1\methods\VI190621W+.M
Title : EPA 8260: Volatile Organic Compounds
Last Update : Fri Jun 21 10:05:40 2019



6/24/19 MJ

AutoFind: Scans 1543, 1544, 1545; Background Corrected with Scan 1537

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	12	40	18.5	14770	PASS
75	95	30	60	49.5	39512	PASS
95	95	100	100	100.0	79875	PASS
96	95	5	9	6.7	5368	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	200	75.9	60627	PASS
175	174	5	9	7.3	4422	PASS
176	174	95	101	97.0	58800	PASS
177	176	5	9	6.7	3930	PASS

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062402.D
Acq On : 24 Jun 2019 9:00 am
Operator : TNL
Sample : 9F24026-TUN1
Misc : A19C125 5mL BFB IS/SURR
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 10:19:13 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Pentafluorobenzene (I)	6.223	168	186211	50.00 ug/L	0.00
45) Chlorobenzene-d5 (I)	9.916	117	274758	50.00 ug/L	0.00
66) 1,4-Dichlorobenzene-d4...	11.856	152	123418	50.00 ug/L	0.00
System Monitoring Compounds					
32) Dibromofluoromethane (S)	5.724	111	102127	50.88 ug/L	0.00
39) 1,4-Difluorobenzene (S)	6.789	114	313000	50.50 ug/L	0.00
48) Toluene-d8 (S)	8.304	98	365982	50.98 ug/L	0.00
67) 4-Bromofluorobenzene (S)	10.980	174	103580	50.66 ug/L	0.00
Target Compounds					Qvalue
3) Chloromethane	1.904	50	392	0.16 ug/L #	47
5) Bromomethane	2.372	96	211	0.18 ug/L #	37
6) Chloroethane	2.506	64	398	0.51 ug/L #	36
14) Methylene Chloride	3.881	84	6837	1.90 ug/L	99
15) Acetone	3.954	43	2736	3.02 ug/L	99
19) tert-Butanol (TBA)	4.307	59	138	0.34 ug/L	46

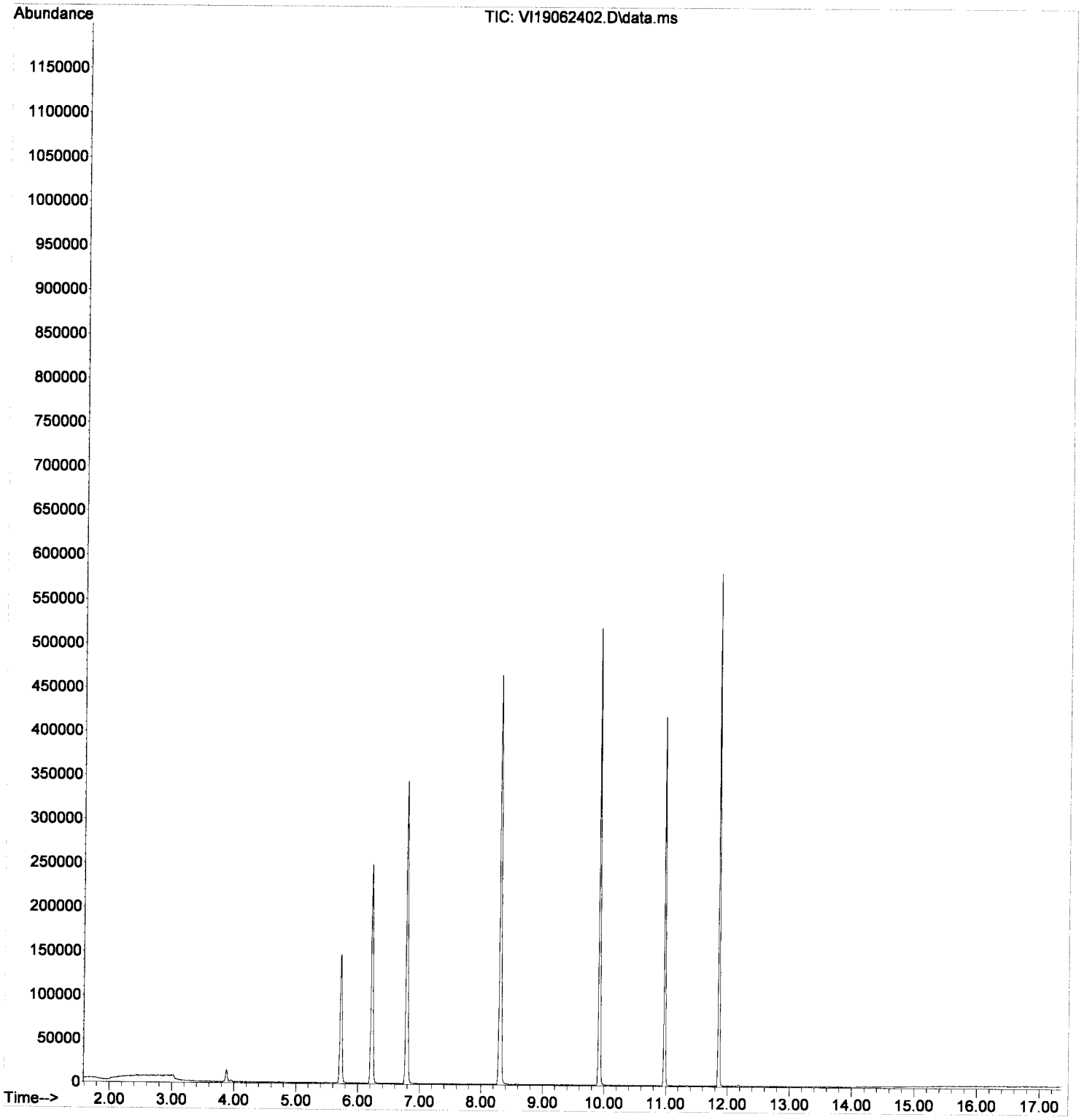
6/24/19 my

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062402.D
Acq On : 24 Jun 2019 9:00 am
Operator : TNL
Sample : 9F24026-TUN1
Misc : A19C125 5mL BFB IS/SURR
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 10:19:13 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062403.D
Acq On : 24 Jun 2019 9:27 am
Operator : TNL
Sample : 9061200-BS1
Misc : 1X 5mL 20/40PPB VOCR+O A19F269
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 10:19:16 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration

6/24/19 bm

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene (I)	50.000	50.000	0.0	91	0.00
2		Dichlorodifluoromethane	20.000	20.606	-3.0	91	0.01
3	P	Chloromethane	20.000	18.904	5.5	89	0.00
4	C	Vinyl Chloride	20.000	20.715	-3.6	92	0.00
5		Bromomethane	20.000	18.572	7.1	87	0.00
6		Chloroethane	20.000	19.296	3.5	92	0.00
7		Trichlorofluoromethane	20.000	20.808	-4.0	92	0.00
8		Ethanol	1250.000	1324.558	-6.0	96	0.01
9	C	1,1-Dichloroethene	20.000	21.160	-5.8	90	0.00
10		Carbon Disulfide	20.000	19.754	1.2	87	0.00
11		Freon 113	20.000	20.115	-0.6	89	0.00
12		Iodomethane	20.000	10.871 NR	45.6#	58	0.00
13		Acrolein	20.000	20.338	-1.7	94	0.00
14		Methylene Chloride	20.000	19.958	0.2	91	0.00
15		Acetone	40.000	40.681	-1.7	98	0.01
16		t-1,2-Dichloroethene	20.000	20.743	-3.7	91	0.00
17		n-Hexane	20.000	18.509	7.5	79	0.00
18		Methyl-tert-butyl-ether	20.000	20.419	-2.1	91	0.00
19		tert-Butanol (TBA)	1250.000	1380.503	-10.4	97	0.00
20		Diisopropyl ether (DIPE)	5.000	5.083	-1.7	95	0.00
21	P	1,1-Dichloroethane	20.000	21.118	-5.6	93	0.00
22		Acrylonitrile	20.000	21.836	-9.2	97	0.00
23		Ethyl-tert-butyl ether (ET	5.000	5.016	-0.3	90	0.00
24		Vinyl Acetate	20.000	23.161	-15.8	108	0.00
25		c-1,2-Dichloroethene	20.000	21.174	-5.9	94	0.00
26		2,2-Dichloropropane	20.000	21.483	-7.4	96	0.00
27		Bromochloromethane	20.000	21.440	-7.2	91	0.00
28	C	Chloroform	20.000	20.677	-3.4	92	0.00
29		Carbon Tetrachloride	20.000	21.433	-7.2	97	0.00
30		Tetrahydrofuran	20.000	20.680	-3.4	98	0.00
31		1,1,1-Trichloroethane	20.000	21.155	-5.8	93	0.00
32	S	Dibromofluoromethane (S)	50.000	50.920	-1.8	93	0.00
33		1,1-Dichloropropene	20.000	20.634	-3.2	90	0.00
34		2-Butanone (MEK)	40.000	42.907	-7.3	98	0.00
35		Benzene	20.000	20.218	-1.1	91	0.00
36		tert-Amyl methyl ether (TA	5.000	4.983	0.3	91	0.00
37		1,2-Dichloroethane (EDC)	20.000	21.064	-5.3	94	0.00
38		iso-Butyl Alcohol	500.000	555.997	-11.2	101	0.00
39	S	1,4-Difluorobenzene (S)	50.000	50.569	-1.1	92	0.00
40		Trichloroethene (TCE)	20.000	20.484	-2.4	90	0.00
41		Tert-Amyl-Ethyl-Ether (TAEE	5.000	5.076	-1.5	88	0.00
42		Dibromomethane	20.000	21.372	-6.9	92	0.00
43	C	1,2-Dichloropropane	20.000	20.977	-4.9	92	0.00
44		Bromodichloromethane	20.000	21.543	-7.7	96	0.00
45		Chlorobenzene-d5 (I)	50.000	50.000	0.0	92	0.00
46		2-Chloroethyl Vinyl Ether	20.000	19.398	3.0	85	0.00
47		c-1,3-Dichloropropene	20.000	20.680	-3.4	92	0.00
48	S	Toluene-d8 (S)	50.000	50.098	-0.2	93	0.00
49	C	Toluene	20.000	19.472	2.6	90	0.00
50		Tetrachloroethene (PCE)	20.000	19.699	1.5	87	0.00

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062403.D
Acq On : 24 Jun 2019 9:27 am
Operator : TNL
Sample : 9061200-BS1
Misc : 1X 5mL 20/40PPB VOCR+O A19F269
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 10:19:16 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
51		4-Methyl-2-Pentanone (MIBK)	40.000	42.567	-6.4	96	0.00
52		t-1,3-Dichloropropene	20.000	21.423	-7.1	95	0.00
53		1,1,2-Trichloroethane	20.000	20.839	-4.2	92	0.00
54		Dibromochloromethane	20.000	21.799	-9.0	99	0.00
55		1,3-Dichloropropane	20.000	20.726	-3.6	93	0.00
56		1,2-Dibromoethane (EDB)	20.000	21.213	-6.1	91	0.00
57		2-Hexanone	40.000	42.040	-5.1	96	0.00
58	P	Chlorobenzene	20.000	20.325	-1.6	91	0.00
59	C	Ethylbenzene	20.000	20.209	-1.0	90	0.00
60		1,1,1,2-Tetrachloroethane	20.000	22.103	-10.5	96	0.00
61		m,p-Xylenes (2)	40.000	40.556	-1.4	91	0.00
62		o-Xylene	20.000	20.415	-2.1	90	0.00
63		Styrene	20.000	20.863	-4.3	90	0.00
64	P	Bromoform	20.000	22.226	-11.1	103	0.00
65		Isopropylbenzene	20.000	20.500	-2.5	90	0.00
66	I	1,4-Dichlorobenzene-d4 (I)	50.000	50.000	0.0	94	0.00
67	S	4-Bromofluorobenzene (S)	50.000	48.667	2.7	92	0.00
68		Bromobenzene	20.000	19.820	0.9	91	0.00
69		n-Propylbenzene	20.000	19.577	2.1	89	0.00
70	P	1,1,2,2-Tetrachloroethane	20.000	20.799	-4.0	94	0.00
71		2-Chlorotoluene	20.000	19.582	2.1	89	0.00
72		1,3,5-Trimethylbenzene	20.000	19.944	0.3	91	0.00
73		1,2,3-Trichloropropane	20.000	21.114	-5.6	94	0.00
74		t-1,4-Dichloro-2-butene	20.000	20.900	-4.5	91	0.00
75		4-Chlorotoluene	20.000	19.756	1.2	90	0.00
76		tert-Butylbenzene	20.000	19.969	0.2	91	0.00
77		1,2,4-Trimethylbenzene	20.000	20.391	-2.0	92	0.00
78		sec-Butylbenzene	20.000	19.704	1.5	90	0.00
79		4-Isopropyltoluene	20.000	20.659	-3.3	92	0.00
80		1,3-Dichlorobenzene	20.000	19.916	0.4	91	0.00
81		1,4-Dichlorobenzene	20.000	19.793	1.0	92	0.00
82		n-Butylbenzene	20.000	20.153	-0.8	89	0.00
83		1,2-Dichlorobenzene	20.000	20.375	-1.9	93	0.00
84		1,2-Dibromo-3-Chloropropane	20.000	21.112	-5.6	99	0.00
85		Hexachlorobutadiene	20.000	20.650	-3.2	89	0.00
86		1,2,4-Trichlorobenzene	20.000	20.620	-3.1	91	0.00
87		Naphthalene	20.000	20.409	-2.0	91	0.00
88		1,2,3-Trichlorobenzene	20.000	20.618	-3.1	92	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062403.D
Acq On : 24 Jun 2019 9:27 am
Operator : TNL
Sample : 9061200-BS1
Misc : 1X 5mL 20/40PPB VOCR+O A19F269
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

6/24/19 mt

Quant Time: Jun 24 10:19:16 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.223	168	192815	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	9.916	117	295428	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	11.856	152	144113	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	5.724	111	105839	50.92	ug/L		0.00
39) 1,4-Difluorobenzene (S)	6.789	114	324529	50.57	ug/L		0.00
48) Toluene-d8 (S)	8.303	98	386708	50.10	ug/L		0.00
67) 4-Bromofluorobenzene (S)	10.980	174	116198	48.67	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.691	85	41202	20.61	ug/L		98
3) Chloromethane	1.904	50	48122	18.90	ug/L		98
4) Vinyl Chloride	2.007	62	47507	20.72	ug/L		96
5) Bromomethane	2.372	96	21989	18.57	ug/L		99
6) Chloroethane	2.506	64	15713	19.30	ug/L		85
7) Trichlorofluoromethane	2.670	101	53566	20.81	ug/L		95
8) Ethanol	3.248	45	62499	1324.56	ug/L		84
9) 1,1-Dichloroethene	3.242	61	55137	21.16	ug/L		98
10) Carbon Disulfide	3.260	76	92752	19.75	ug/L		99
11) Freon 113	3.297	101	34045	20.12	ug/L		99
12) Iodomethane	3.400	142	8429	10.87	ug/L		91
13) Acrolein	3.631	56	10676	20.34	ug/L		78
14) Methylene Chloride	3.881	84	39815	19.96	ug/L		98
15) Acetone	3.954	43	38198	40.68	ug/L		96
16) t-1,2-Dichloroethene	4.051	61	52793	20.74	ug/L		99
17) n-Hexane	4.130	86	6578	18.51	ug/L	#	81
18) Methyl-tert-butyl-ether	4.179	73	127232	20.42	ug/L		93
19) tert-Butanol (TBA)	4.300	59	578902	1380.50	ug/L		86
20) Diisopropyl ether (DIPE)	4.574	45	33070	5.08	ug/L		93
21) 1,1-Dichloroethane	4.696	63	70824	21.12	ug/L		97
22) Acrylonitrile	4.757	53	23289	21.84	ug/L		100
23) Ethyl-tert-butyl ether...	4.951	59	31607	5.02	ug/L		96
24) Vinyl Acetate	4.964	43	98319	23.16	ug/L		98
25) c-1,2-Dichloroethene	5.249	61	57513	21.17	ug/L		98
26) 2,2-Dichloropropane	5.359	77	56279	21.48	ug/L		97
27) Bromochloromethane	5.456	130	26845	21.44	ug/L		84
28) Chloroform	5.535	83	71595	20.68	ug/L		98
29) Carbon Tetrachloride	5.669	117	45380	21.43	ug/L		94
30) Tetrahydrofuran	5.706	42	22468	20.68	ug/L		89
31) 1,1,1-Trichloroethane	5.742	97	58382	21.15	ug/L		95
33) 1,1-Dichloropropene	5.870	75	54282	20.63	ug/L		97
34) 2-Butanone (MEK)	5.864	43	67097	42.91	ug/L		97
35) Benzene	6.132	78	162622	20.22	ug/L		97
36) tert-Amyl methyl ether...	6.253	73	30149	4.98	ug/L		96
37) 1,2-Dichloroethane (EDC)	6.351	62	55934	21.06	ug/L		93
38) iso-Butyl Alcohol	6.381	43	88722	556.00	ug/L		90
40) Trichloroethene (TCE)	6.752	130	39858	20.48	ug/L		95
41) Tert-Amyl-Ethyl-Ether ...	7.008	59	23605	5.08	ug/L		87
42) Dibromomethane	7.208	93	27351	21.37	ug/L		93
43) 1,2-Dichloropropane	7.318	63	43212	20.98	ug/L		91
44) Bromodichloromethane	7.385	83	51202	21.54	ug/L		93
46) 2-Chloroethyl Vinyl Ether	8.030	63	31486	19.40	ug/L	#	100
47) c-1,3-Dichloropropene	8.097	75	62756	20.68	ug/L		94

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062403.D
Acq On : 24 Jun 2019 9:27 am
Operator : TNL
Sample : 9061200-BS1
Misc : 1X 5mL 20/40PPB VOCR+O A19F269
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 10:19:16 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration

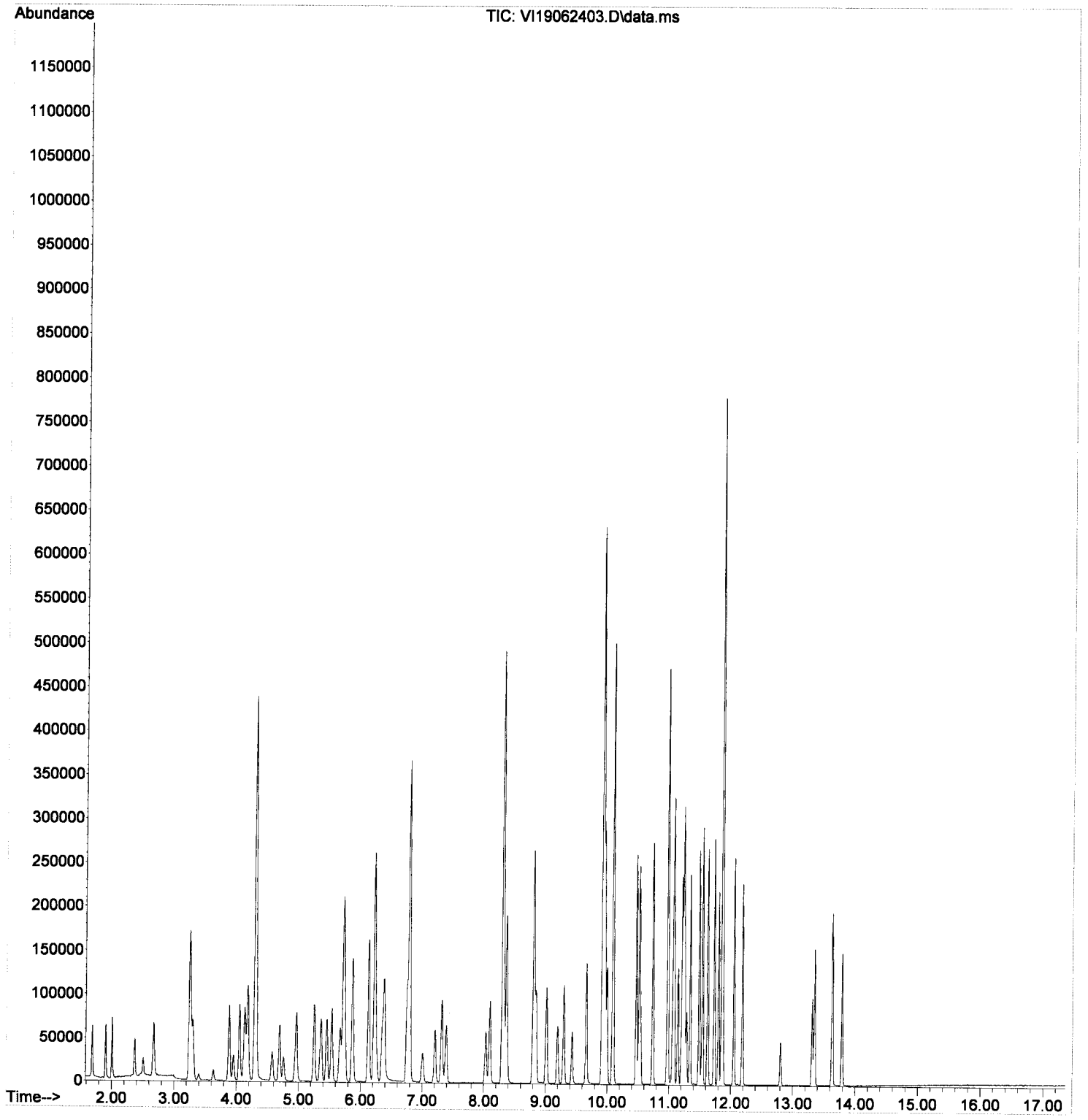
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Toluene	8.364	91	164092	19.47	ug/L		98
50) Tetrachloroethene (PCE)	8.802	166	37710	19.70	ug/L		88
51) 4-Methyl-2-Pentanone (...	8.808	43	125772	42.57	ug/L		99
52) t-1,3-Dichloropropene	8.845	75	59526	21.42	ug/L		96
53) 1,1,2-Trichloroethane	9.015	97	38739	20.84	ug/L		96
54) Dibromochloromethane	9.192	129	38003	21.80	ug/L		96
55) 1,3-Dichloropropane	9.295	76	68667	20.73	ug/L		98
56) 1,2-Dibromoethane (EDB)	9.429	107	41528	21.21	ug/L		98
57) 2-Hexanone	9.660	43	91465	42.04	ug/L		94
58) Chlorobenzene	9.934	112	104149	20.32	ug/L		93
59) Ethylbenzene	9.958	91	178371	20.21	ug/L		99
60) 1,1,1,2-Tetrachloroethane	9.995	131	34582	22.10	ug/L		98
61) m,p-Xylenes (2)	10.092	91	269663	40.56	ug/L		97
62) o-Xylene	10.469	91	138362	20.41	ug/L		97
63) Styrene	10.518	104	108030	20.86	ug/L		92
64) Bromoform	10.542	173	25317	22.23	ug/L		96
65) Isopropylbenzene	10.737	105	164557	20.50	ug/L		99
68) Bromobenzene	11.059	156	43781	19.82	ug/L	#	75
69) n-Propylbenzene	11.078	91	192029	19.58	ug/L		97
70) 1,1,2,2-Tetrachloroethane	11.144	85	38486	20.80	ug/L		93
71) 2-Chlorotoluene	11.211	126	38800	19.58	ug/L		88
72) 1,3,5-Trimethylbenzene	11.236	105	132226	19.94	ug/L		99
73) 1,2,3-Trichloropropane	11.254	110	17940	21.11	ug/L		94
74) t-1,4-Dichloro-2-butene	11.284	53	14986	20.90	ug/L		78
75) 4-Chlorotoluene	11.339	91	121357	19.76	ug/L		93
76) tert-Butylbenzene	11.485	91	76293	19.97	ug/L		91
77) 1,2,4-Trimethylbenzene	11.540	105	135533	20.39	ug/L		93
78) sec-Butylbenzene	11.625	105	162015	19.70	ug/L		99
79) 4-Isopropyltoluene	11.728	119	134060	20.66	ug/L		100
80) 1,3-Dichlorobenzene	11.801	146	76983	19.92	ug/L		99
81) 1,4-Dichlorobenzene	11.868	146	78982	19.79	ug/L		97
82) n-Butylbenzene	12.051	91	119946	20.15	ug/L		97
83) 1,2-Dichlorobenzene	12.185	146	76284	20.38	ug/L		99
84) 1,2-Dibromo-3-Chloropr...	12.805	157	12337	21.11	ug/L		84
85) Hexachlorobutadiene	13.310	223	11145	20.65	ug/L		90
86) 1,2,4-Trichlorobenzene	13.347	180	44405	20.62	ug/L		98
87) Naphthalene	13.633	128	143763	20.41	ug/L		96
88) 1,2,3-Trichlorobenzene	13.791	180	43105	20.62	ug/L		94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062403.D
Acq On : 24 Jun 2019 9:27 am
Operator : TNL
Sample : 9061200-BS1
Misc : 1X 5mL 20/40PPB VOCR+O A19F269
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 10:19:16 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062404.D
Acq On : 24 Jun 2019 9:54 am
Operator : TNL
Sample : 9061200-BS2
Misc : 1X 5mL 500PPB GX A19F151
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 10:19:48 2019
Quant Method : C:\msdchem\1\methods\VI190621G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Jun 21 11:04:13 2019
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene (IS)	50.000	50.000	0.0	100	0.00
2	S	1,4-Difluorobenzene (Sur)	50.000	49.216	1.6	99	0.00
3	S	4-Bromofluorobenzene (Sur)	50.000	49.343	1.3	99	0.00
4	H	NWTPH-Gx (TPH)	500.000	481.710	3.7	96	0.00
5	H	TPHg (C5-C9)	500.000	495.913	0.8	99	0.00
6	H	TPHg (C6-C10)	500.000	501.147	-0.2	99	0.00
7	H	CA-LUFT (C5-C12)	500.000	487.275	2.5	98	0.00
8		Benzene (NR)	-1.000	0.000	0.0	101	0.00
9	S	Toluene-d8 (NR)	-1.000	0.000	0.0	98	0.00
10		Toluene (NR)	-1.000	0.000	0.0	99	0.00
11	S	Chlorobenzene-d5 (NR)	-1.000	0.000	0.0	99	0.00
12	S	1,4-Dichlorobenzene-d4 (NR)	-1.000	0.000	0.0	98	0.00
13		Naphthalene (NR)	-1.000	0.000	0.0	120	0.00

6/24/19

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062404.D
Acq On : 24 Jun 2019 9:54 am
Operator : TNL
Sample : 9061200-BS2
Misc : 1X 5mL 500PPB GX A19F151
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 10:19:48 2019
Quant Method : C:\msdchem\1\methods\VI190621G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Jun 21 11:04:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Pentafluorobenzene (IS)	6.223	168	193233	50.00 ug/L	0.00
System Monitoring Compounds					
2) 1,4-Difluorobenzene (Sur)	6.783	114	319868	49.22 ug/L	0.00
3) 4-Bromofluorobenzene (...	10.974	174	111470	49.34 ug/L	0.00
9) Toluene-d8 (NR)	8.303	98	377544	0.00 ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.916	117	289724	0.00 ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.856	150	210802	0.00 ug/L	0.00
Target Compounds					Qvalue
4) NWTPH-Gx (TPH)	9.890	TIC	2926942m	481.71 ug/L	
5) TPHg (C5-C9)	9.890	TIC	4193343m	495.91 ug/L	
6) TPHg (C6-C10)	9.890	TIC	3576432m	501.15 ug/L	
7) CA-LUFT (C5-C12)	9.890	TIC	4910004m	487.27 ug/L	

6/24/19 tw

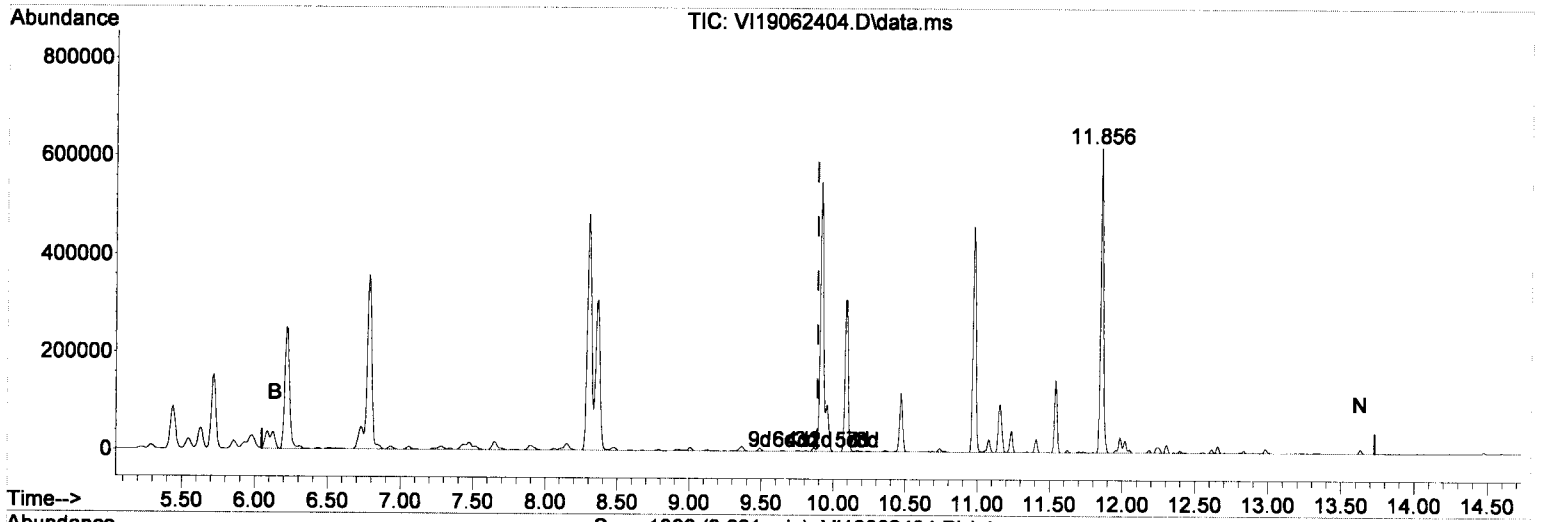
NR

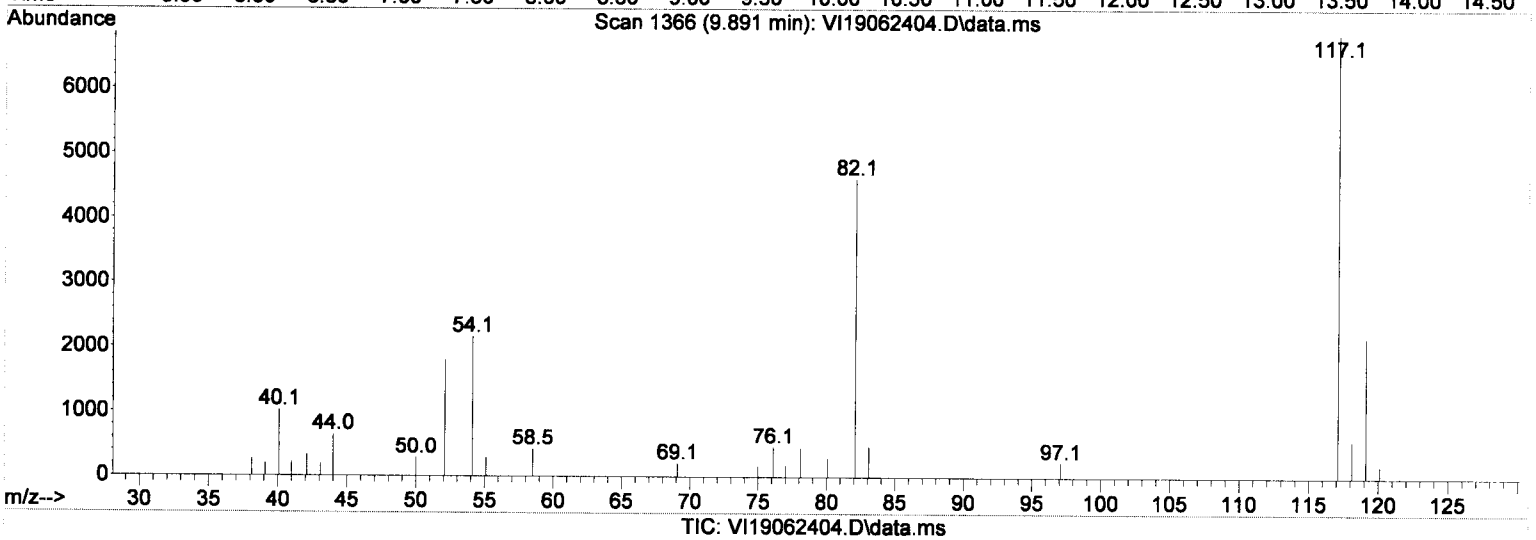
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062404.D
Acq On : 24 Jun 2019 9:54 am
Operator : TNL
Sample : 9061200-BS2
Misc : 1X 5mL 500PPB GX A19F151
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 10:19:48 2019
Quant Method : C:\msdchem\1\methods\VI190621G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Jun 21 11:04:13 2019
Response via : Initial Calibration





(4) NWTPH-Gx (TPH) (H)

9.890min (0.000) 481.71 ug/L m

response 2926942

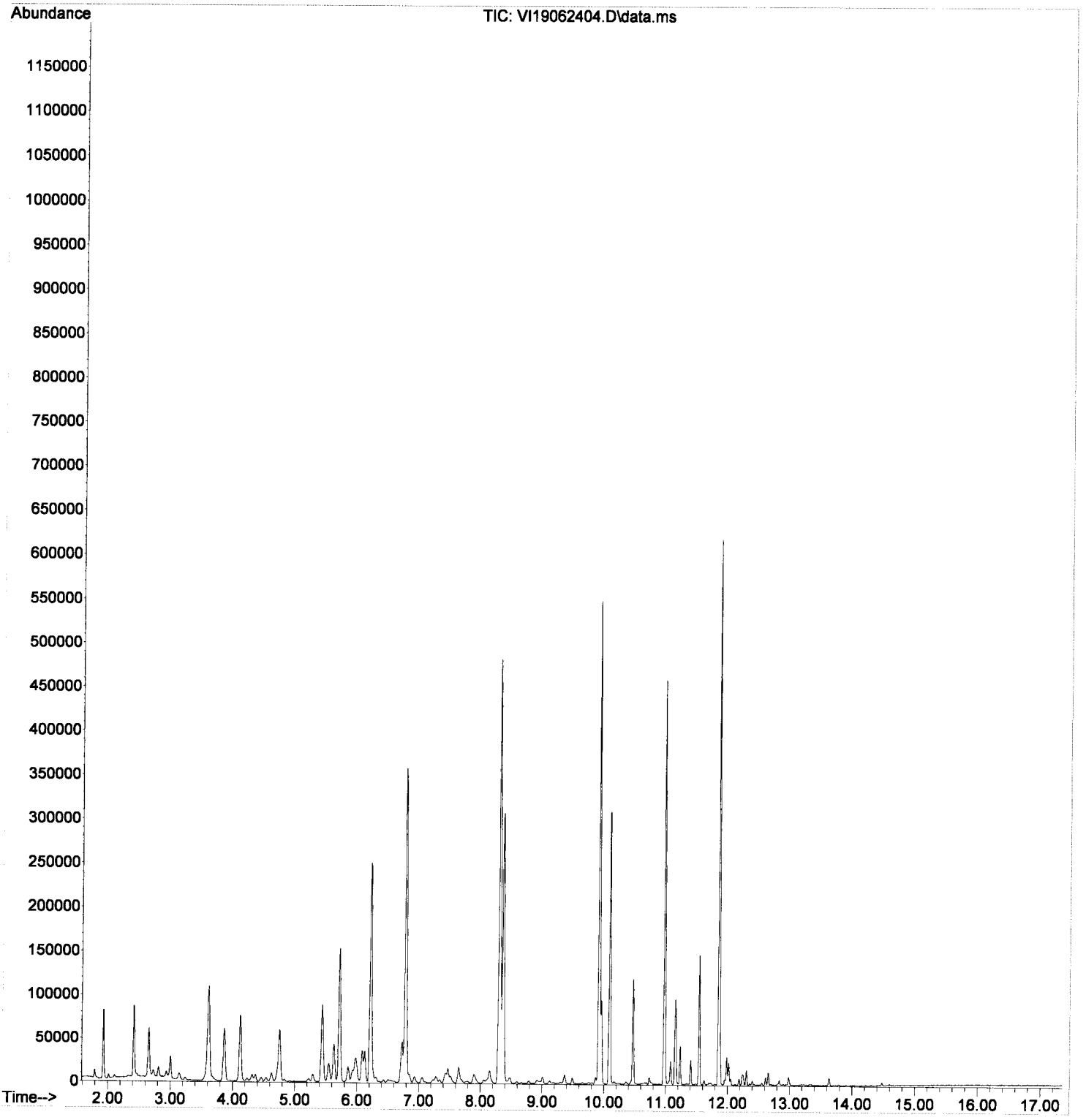
Signal	Exp%	Act%
TIC	100.00	100.00
0.00	0.00	0.02#
0.00	0.00	0.01#
0.00	0.00	0.00

6/24/19 hm

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062404.D
Acq On : 24 Jun 2019 9:54 am
Operator : TNL
Sample : 9061200-BS2
Misc : 1X 5mL 500PPB GX A19F151
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 10:19:48 2019
Quant Method : C:\msdchem\1\methods\VI190621G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Jun 21 11:04:13 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062405.D
Acq On : 24 Jun 2019 10:21 am
Operator : TNL
Sample : 9061200-BLK1
Misc : 1X 5mL DI
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 11:28:22 2019
Quant Method : C:\msdchem\1\methods\VI190621G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Jun 21 11:04:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.223	168	184427	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.789	114	309461	49.89	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.980	174	102523	47.55	ug/L	0.00
9) Toluene-d8 (NR)	8.304	98	365642	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.916	117	276933	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.856	150	193367	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.890	TIC	34037m	30.74	ug/L	
5) TPHg (C5-C9)	9.890	TIC	320110m	15.58	ug/L	
6) TPHg (C6-C10)	9.890	TIC	309884m	21.96	ug/L	
7) CA-LUFT (C5-C12)	9.890	TIC	358624m	19.45	ug/L	

6/24/19 MC

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062405.D
Acq On : 24 Jun 2019 10:21 am
Operator : TNL
Sample : 9061200-BLK1
Misc : 1X 5mL DI
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 11:28:04 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.223	168	184427	50.00	ug/L	0.00
45) Chlorobenzene-d5 (I)	9.916	117	276933	50.00	ug/L	0.00
66) 1,4-Dichlorobenzene-d4...	11.856	152	123478	50.00	ug/L	0.00
System Monitoring Compounds						
32) Dibromofluoromethane (S)	5.718	111	100459	50.53	ug/L	0.00
39) 1,4-Difluorobenzene (S)	6.789	114	309461	50.41	ug/L	0.00
48) Toluene-d8 (S)	8.304	98	365642	50.53	ug/L	0.00
67) 4-Bromofluorobenzene (S)	10.980	174	102523	50.11	ug/L	0.00
Target Compounds						Qvalue
3) Chloromethane	1.898	50	274	0.11	ug/L #	47
5) Bromomethane	2.366	96	186	0.16	ug/L #	47
6) Chloroethane	2.524	64	188	0.24	ug/L #	36
14) Methylene Chloride	3.875	84	2223	Below Cal		88
15) Acetone	3.948	43	527	0.59	ug/L #	44

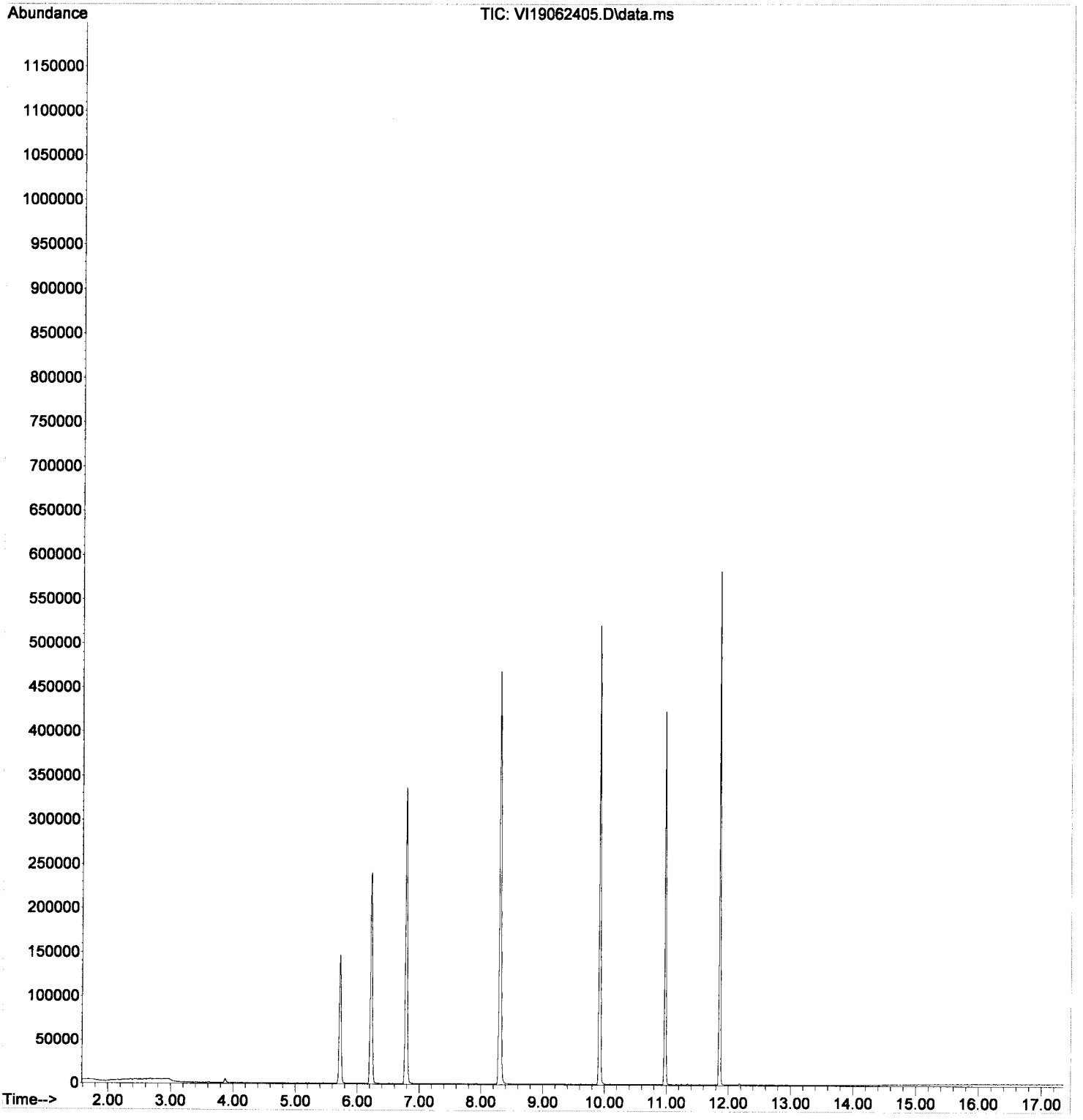
(#) = qualifier out of range (m) = manual integration (+) = signals summed

6/24/19 tm

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062405.D
Acq On : 24 Jun 2019 10:21 am
Operator : TNL
Sample : 9061200-BLK1
Misc : 1X 5mL DI
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 11:28:04 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062406.D
Acq On : 24 Jun 2019 10:48 am
Operator : TNL
Sample : A9F0692-01
Misc : 1X 5mL 8260C TB
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 11:28:08 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration

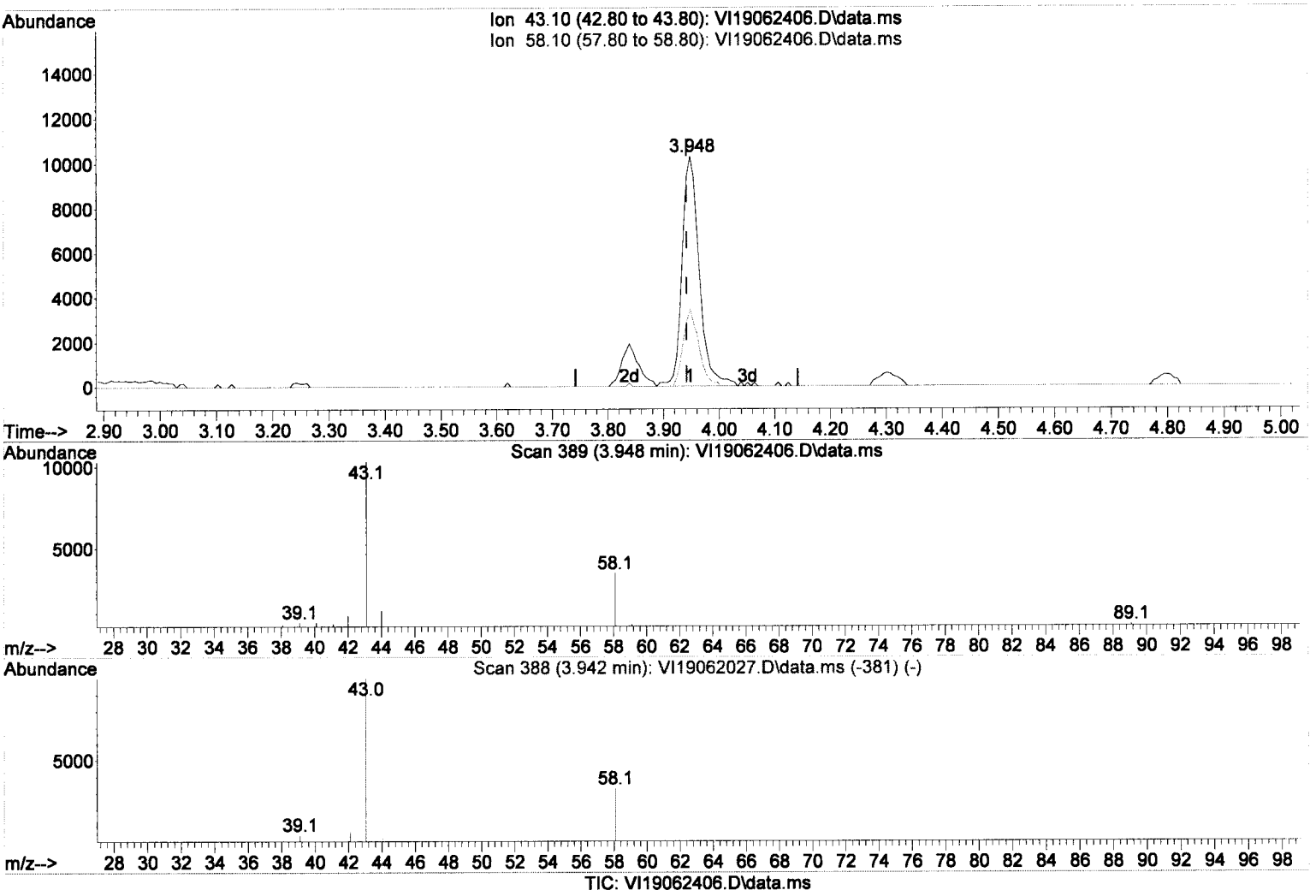
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.223	168	167630	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	9.916	117	247956	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	11.856	152	111412	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	5.718	111	91847	50.83	ug/L		0.00
39) 1,4-Difluorobenzene (S)	6.789	114	285209	51.12	ug/L		0.00
48) Toluene-d8 (S)	8.303	98	331378	51.15	ug/L		0.00
67) 4-Bromofluorobenzene (S)	10.980	174	93660	50.74	ug/L		0.00
Target Compounds							Qvalue
3) Chloromethane	1.897	50	254	0.11	ug/L	#	47
6) Chloroethane	2.500	64	200	0.28	ug/L	#	36
8) Ethanol	3.242	45	191	4.66	ug/L	#	29
14) Methylene Chloride	3.881	84	325	Below Cal		#	70
15) Acetone	3.948	43	22119	27.10	ug/L		95
19) tert-Butanol (TBA)	4.300	59	9154	25.11	ug/L		97
34) 2-Butanone (MEK)	5.882	43	235	0.17	ug/L		52
38) iso-Butyl Alcohol	6.393	43	347	2.50	ug/L	#	18
49) Toluene	8.364	91	835	0.12	ug/L		89
87) Naphthalene	13.633	128	667	0.12	ug/L		81

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062406.D
Acq On : 24 Jun 2019 10:48 am
Operator : TNL
Sample : A9F0692-01
Misc : 1X 5mL 8260C TB
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 11:28:08 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



TIC: VI19062406.D\data.ms

(15) Acetone

3.948min (+ 0.006) 27.10 ug/L

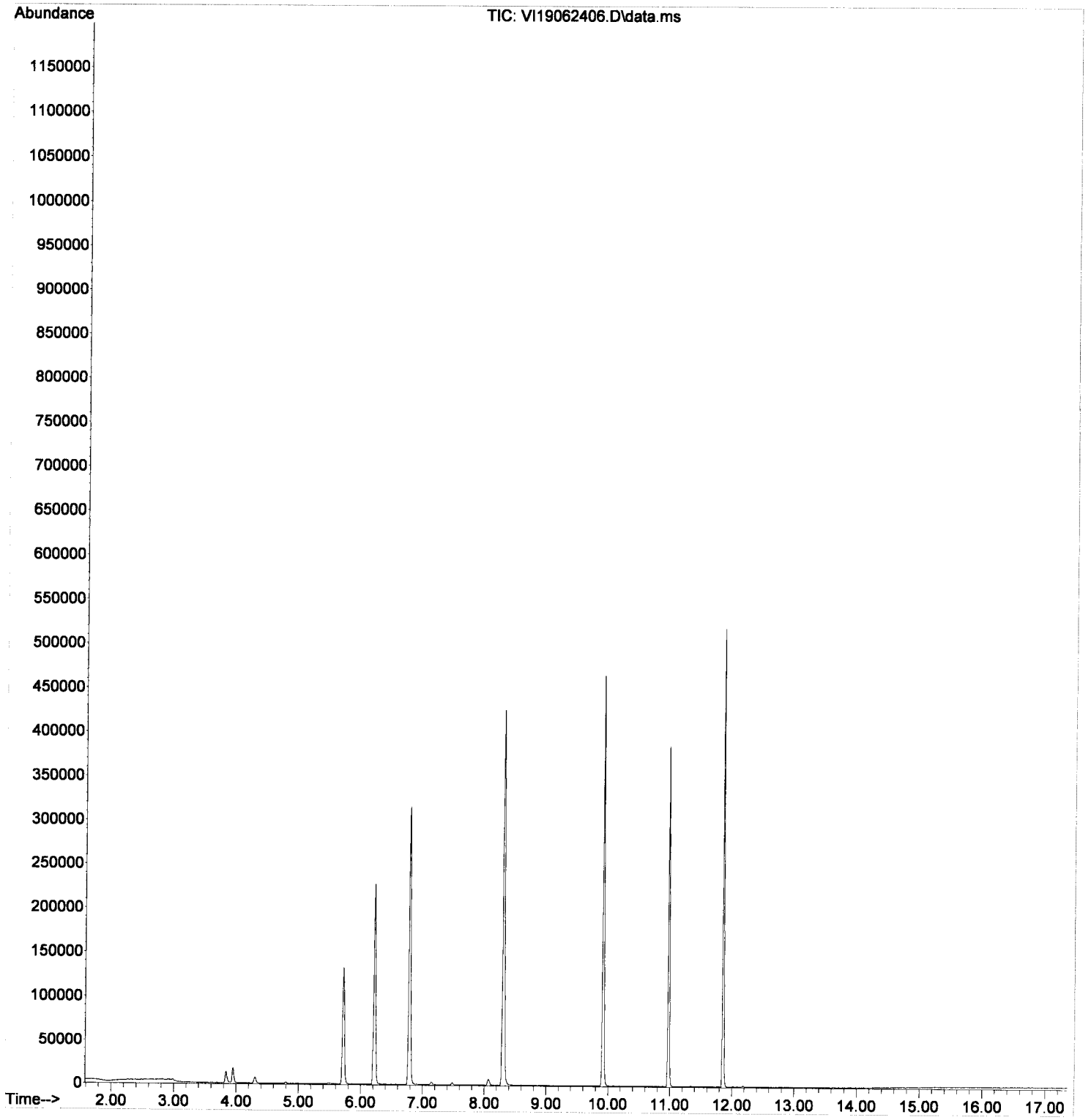
response 22119

Ion	Exp%	Act%
43.10	100.00	100.00
58.10	30.80	33.56
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062406.D
Acq On : 24 Jun 2019 10:48 am
Operator : TNL
Sample : A9F0692-01
Misc : 1X 5mL 8260C TB
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 11:28:08 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062407.D
Acq On : 24 Jun 2019 11:15 am
Operator : TNL
Sample : A9F0692-02@100
Misc : 100X 500uL/50mL 8260C
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 14:22:00 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Pentafluorobenzene (I)	6.223	168	174524	50.00 ug/L	0.00
45) Chlorobenzene-d5 (I)	9.916	117	260097	50.00 ug/L	0.00
66) 1,4-Dichlorobenzene-d4...	11.856	152	118113	50.00 ug/L	0.00
System Monitoring Compounds					
32) Dibromofluoromethane (S)	5.724	111	95232	50.62 ug/L	0.00
39) 1,4-Difluorobenzene (S)	6.789	114	295872	50.94 ug/L	0.00
48) Toluene-d8 (S)	8.303	98	345795	50.88 ug/L	0.00
67) 4-Bromofluorobenzene (S)	10.980	174	98103	50.13 ug/L	0.00
Target Compounds					Qvalue
3) Chloromethane	1.904	50	237	0.10 ug/L #	47
6) Chloroethane	2.512	64	122	0.17 ug/L #	36
10) Carbon Disulfide	3.260	76	928	0.22 ug/L	78
14) Methylene Chloride	3.875	84	1932	Below Cal	98
15) Acetone	3.954	43	800	0.94 ug/L #	44
35) Benzene	6.126	78	333913	45.86 ug/L	97
36) tert-Amyl methyl ether...	6.132	73	5116	0.93 ug/L #	46
49) Toluene	8.364	91	83038	11.19 ug/L	96
59) Ethylbenzene	9.958	91	6753	0.87 ug/L	98
61) m,p-Xylenes (2)	10.092	91	15832	2.70 ug/L	98
62) o-Xylene	10.469	91	6570	1.10 ug/L	98
63) Styrene	10.518	104	4929	1.08 ug/L	91
72) 1,3,5-Trimethylbenzene	11.236	105	1413	0.26 ug/L	93
76) tert-Butylbenzene	11.540	91	387	0.12 ug/L #	57
77) 1,2,4-Trimethylbenzene	11.540	105	4066	0.75 ug/L	98
82) n-Butylbenzene	11.990	91	1456	0.30 ug/L #	31
87) Naphthalene	13.633	128	249625	43.24 ug/L	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

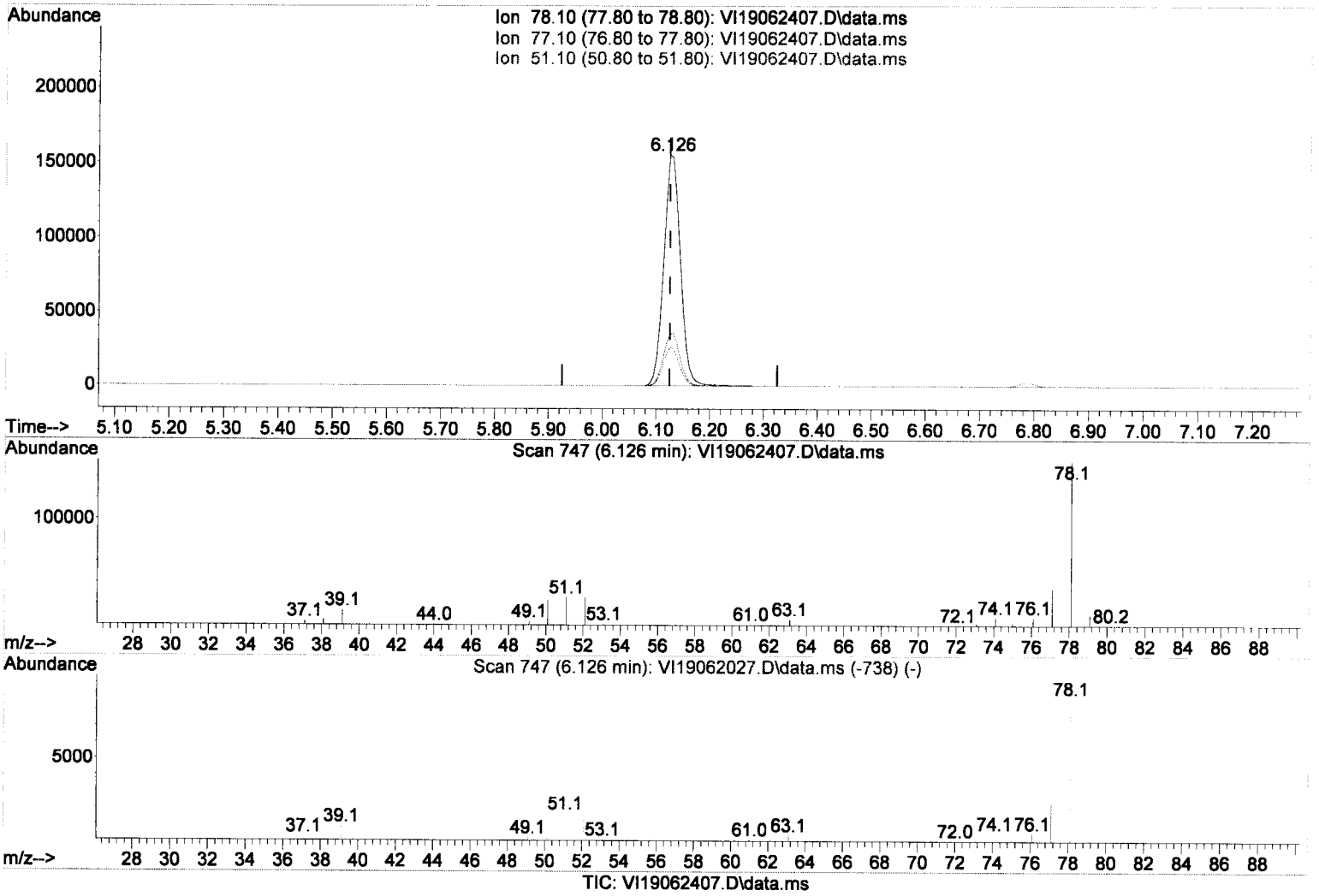
6/24/19 tnt

NR NR QLR QLR NR ND ND 0.80 ppb

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062407.D
Acq On : 24 Jun 2019 11:15 am
Operator : TNL
Sample : A9F0692-02@100
Misc : 100X 500uL/50mL 8260C
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 14:22:00 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



TIC: VI19062407.D\data.ms

(35) Benzene

6.126min (-0.000) 45.86 ug/L

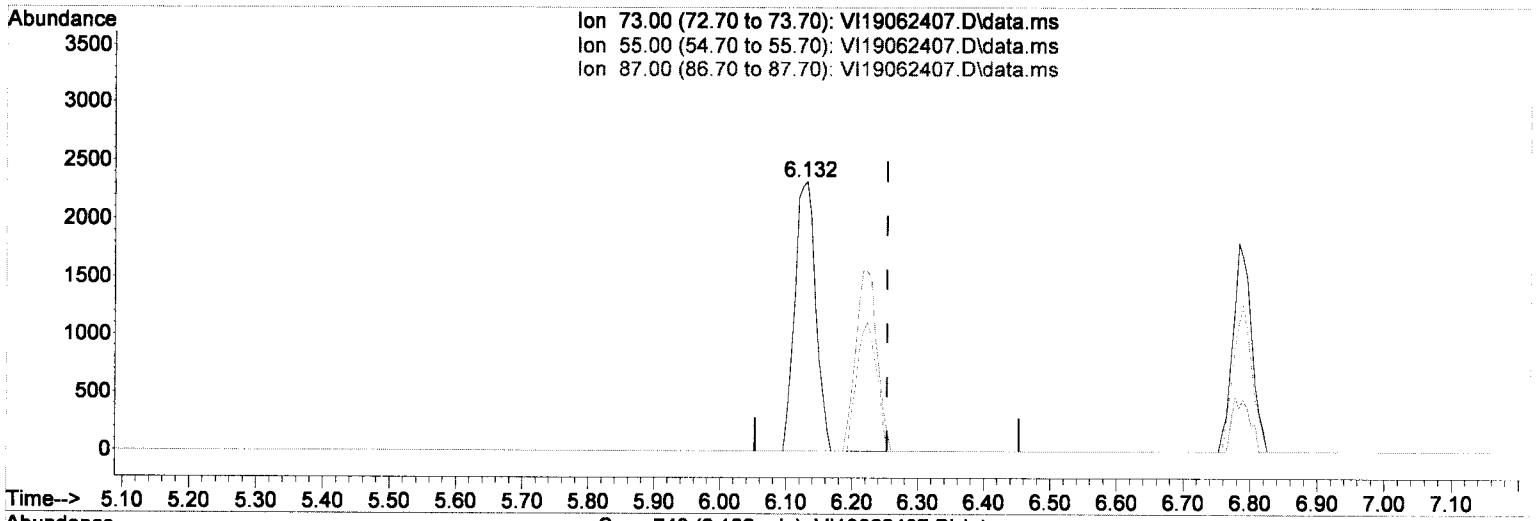
response 333913

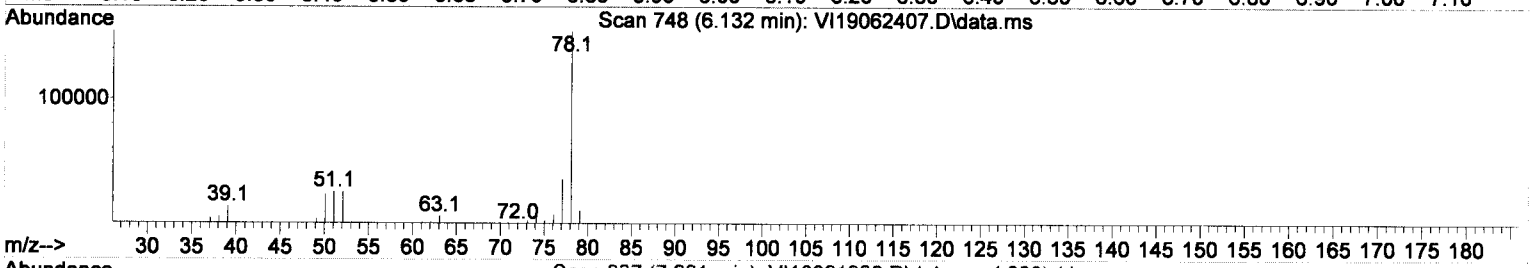
Ion	Exp%	Act%
78.10	100.00	100.00
77.10	24.70	22.34
51.10	17.20	16.76
0.00	0.00	0.00

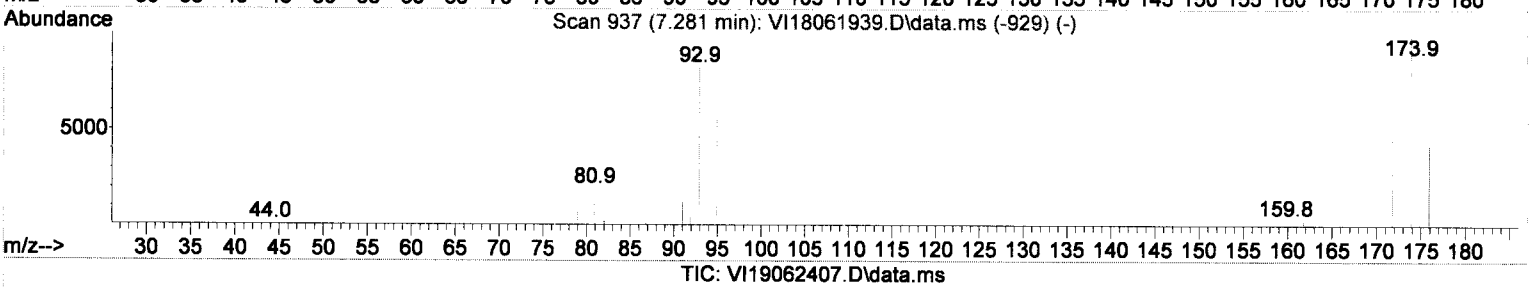
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062407.D
Acq On : 24 Jun 2019 11:15 am
Operator : TNL
Sample : A9F0692-02@100
Misc : 100X 500uL/50mL 8260C
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 14:22:00 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration







TIC: VI19062407.D\data.ms

(36) tert-Amyl methyl ether (TAME)

6.132min (-0.121) 0.93 ug/L

response 5116

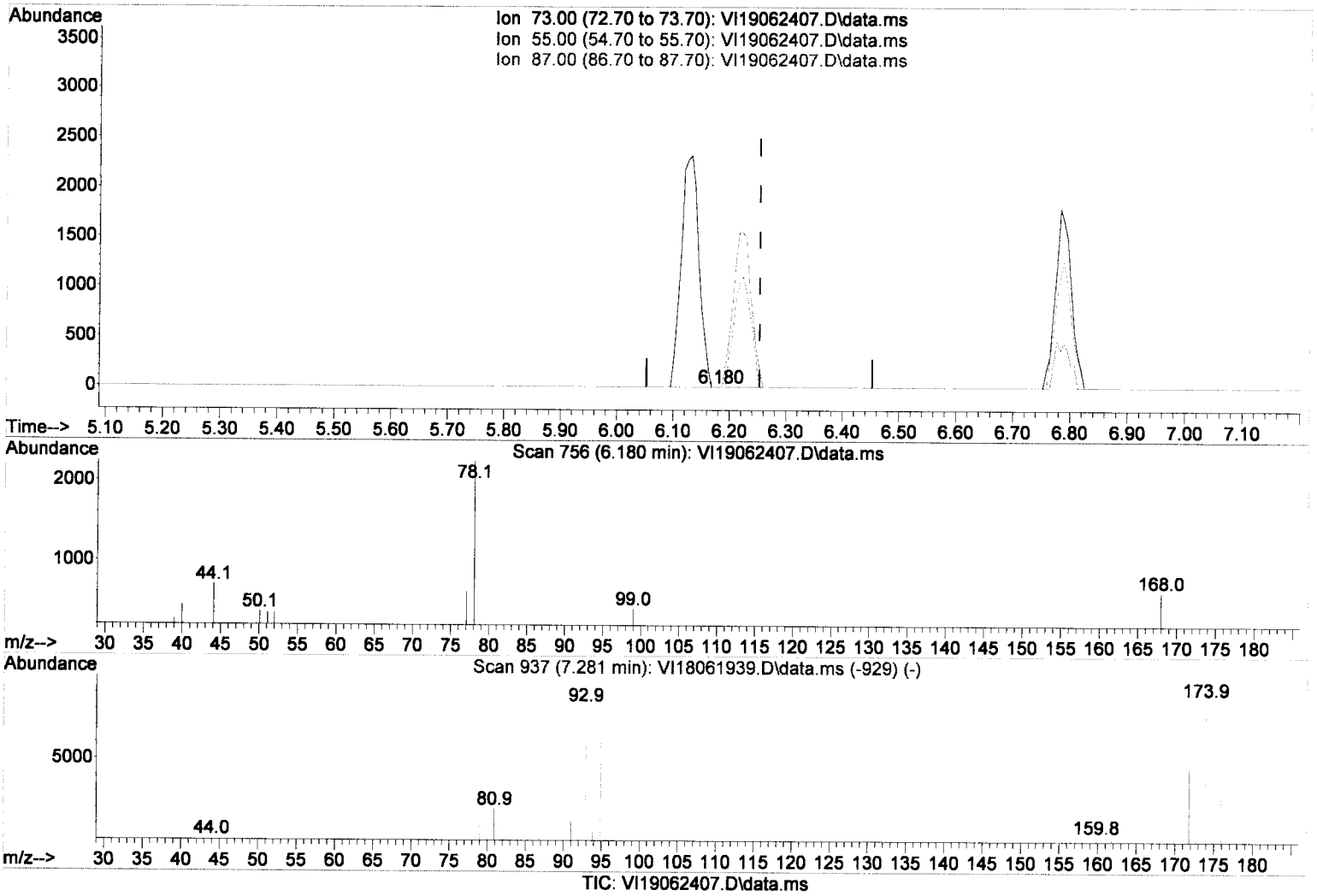
Ion	Exp%	Act%
73.00	100.00	100.00
55.00	32.20	0.00#
87.00	24.60	0.00
0.00	0.00	0.00

(MT) 6/24/19

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062407.D
Acq On : 24 Jun 2019 11:15 am
Operator : TNL
Sample : A9F0692-02@100
Misc : 100X 500uL/50mL 8260C
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 14:22:00 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



TIC: VI19062407.D\data.ms

(36) tert-Amyl methyl ether (TAME)

6.180min (-0.073) 0.00 ug/L m

response 0

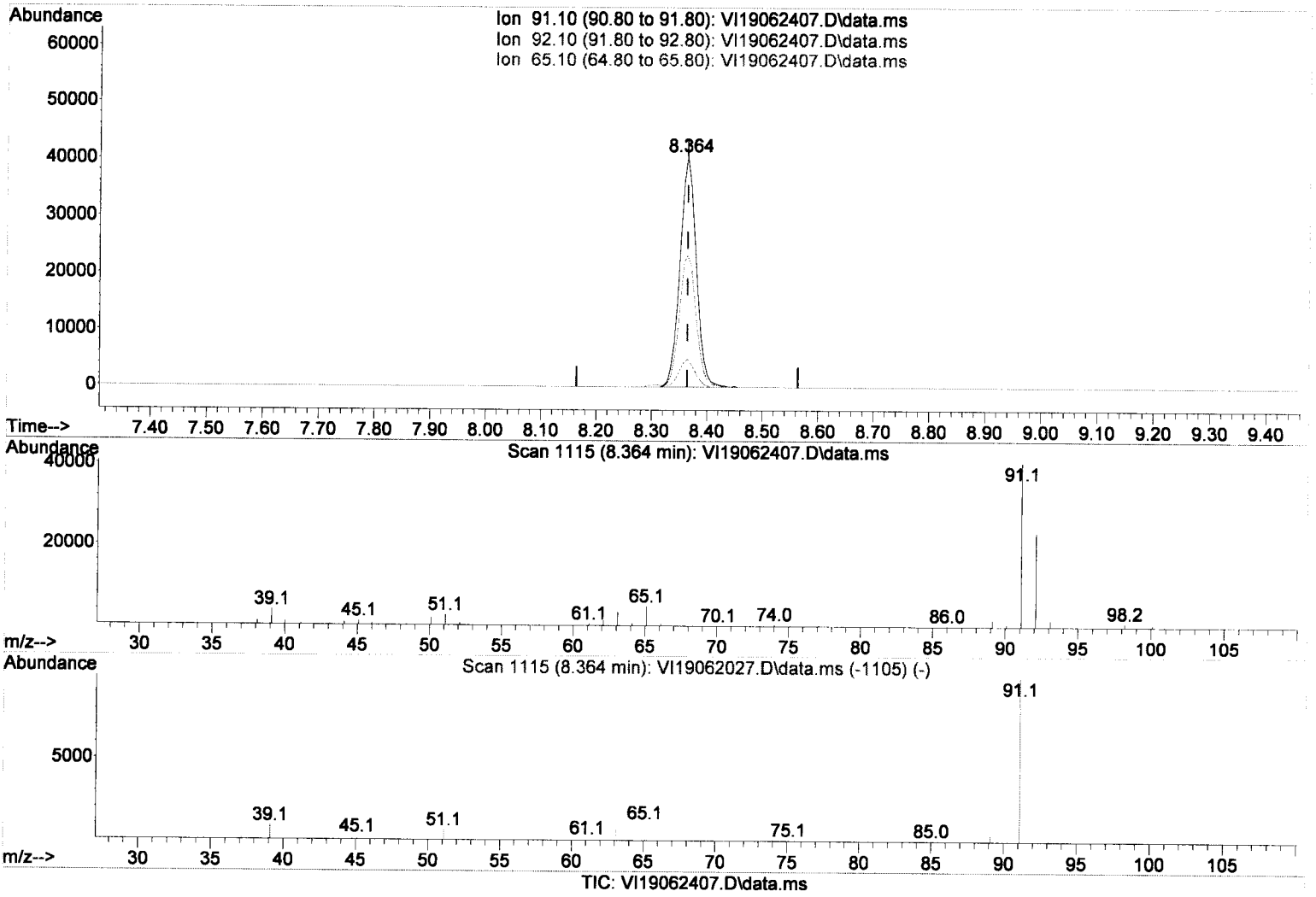
Ion	Exp%	Act%
73.00	100.00	0.00
55.00	32.20	0.00#
87.00	24.60	0.00
0.00	0.00	0.00

C ND
6/25/19 JM

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062407.D
Acq On : 24 Jun 2019 11:15 am
Operator : TNL
Sample : A9F0692-02@100
Misc : 100X 500uL/50mL 8260C
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 14:22:00 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



TIC: VI19062407.D\data.ms

(49) Toluene (C)

8.364min (-0.000) 11.19 ug/L

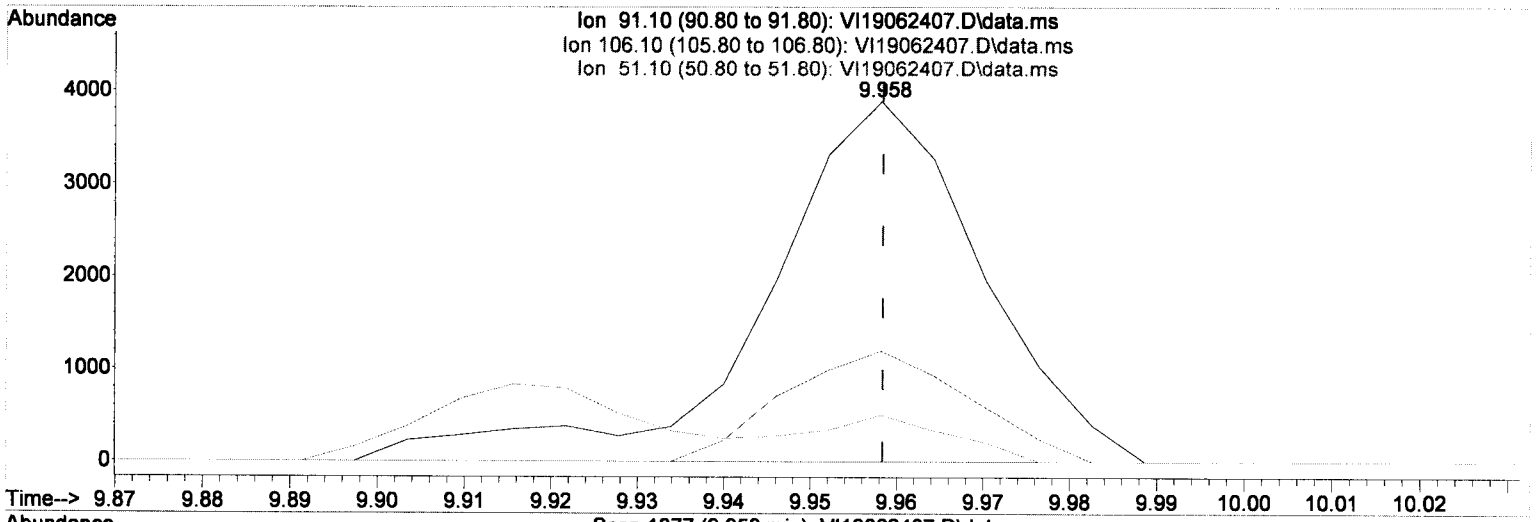
response 83038

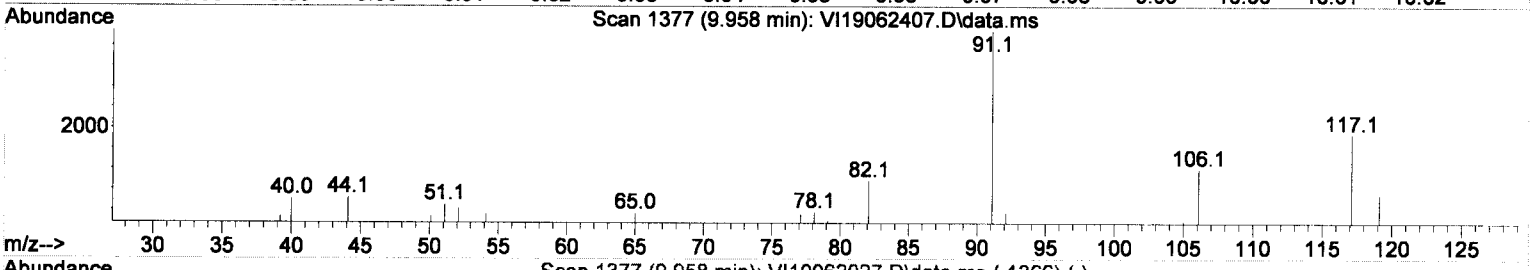
Ion	Exp%	Act%
91.10	100.00	100.00
92.10	59.80	57.08
65.10	10.30	12.14
0.00	0.00	0.00

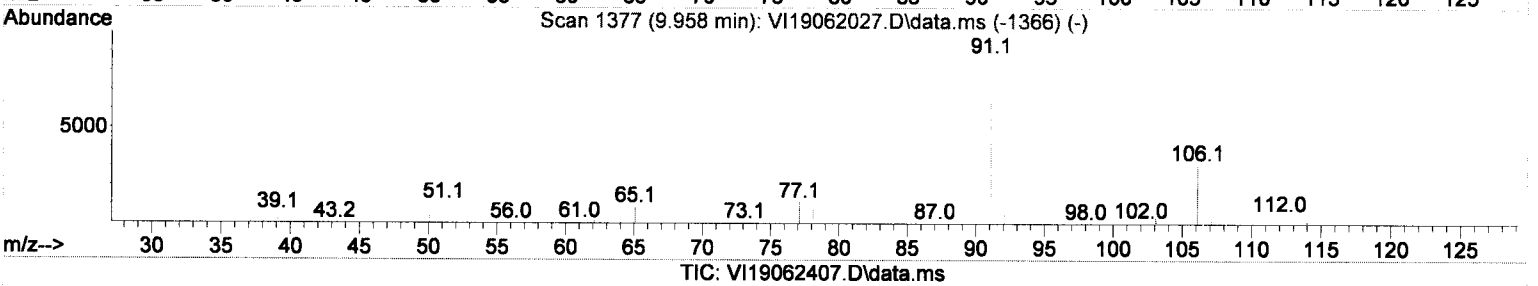
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062407.D
Acq On : 24 Jun 2019 11:15 am
Operator : TNL
Sample : A9F0692-02@100
Misc : 100X 500uL/50mL 8260C
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 14:22:00 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration







TIC: VI19062407.D\data.ms

(59) Ethylbenzene (C)

9.958min (-0.000) 0.87 ug/L

response 6753

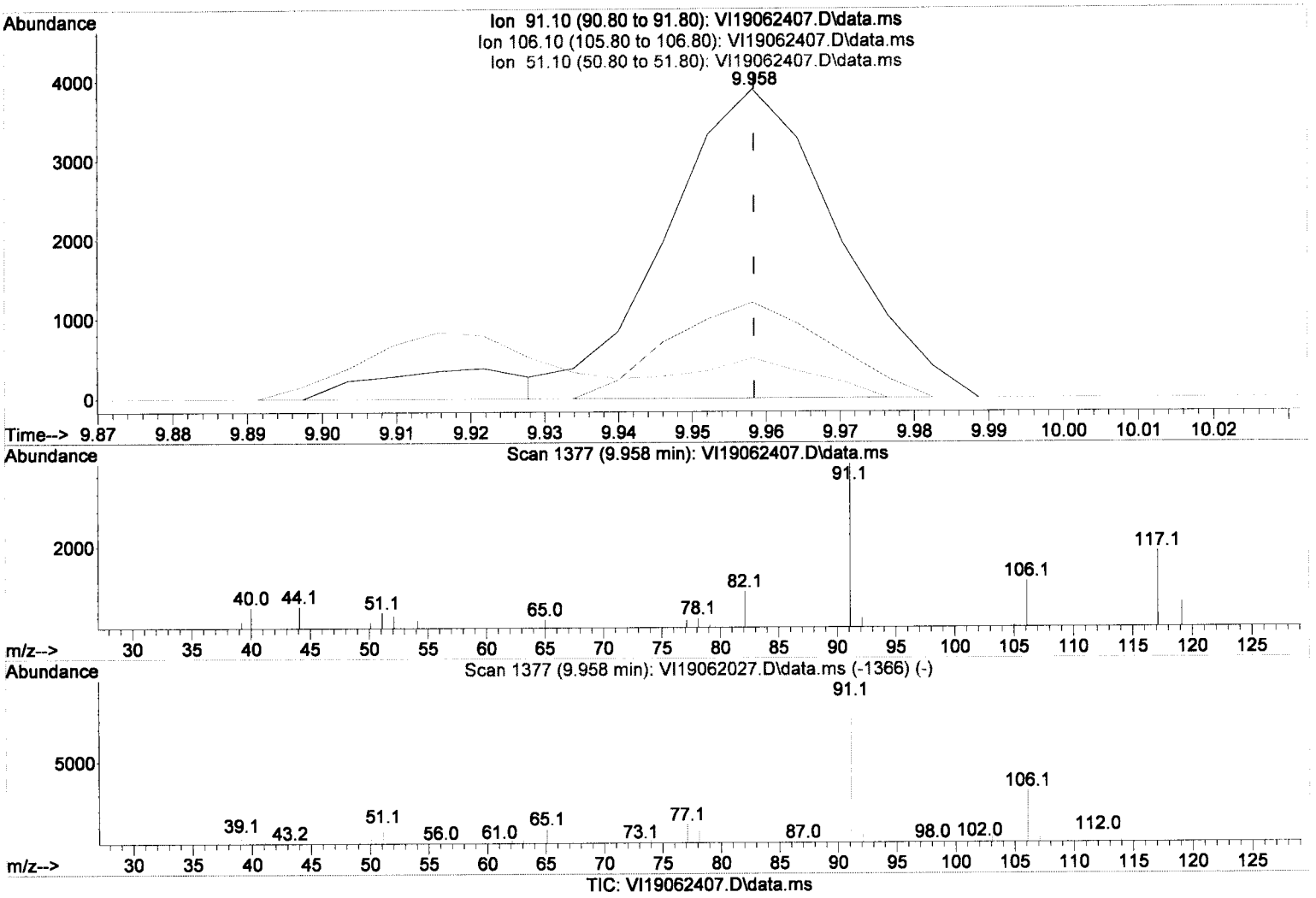
Ion	Exp%	Act%
91.10	100.00	100.00
106.10	30.80	30.87
51.10	10.40	12.95
0.00	0.00	0.00

(MI) 6/28/19 tm

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062407.D
Acq On : 24 Jun 2019 11:15 am
Operator : TNL
Sample : A9F0692-02@100
Misc : 100X 500uL/50mL 8260C
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 14:22:00 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



(59) Ethylbenzene (C)

9.958min (-0.000) 0.80 ug/L m

response 6202

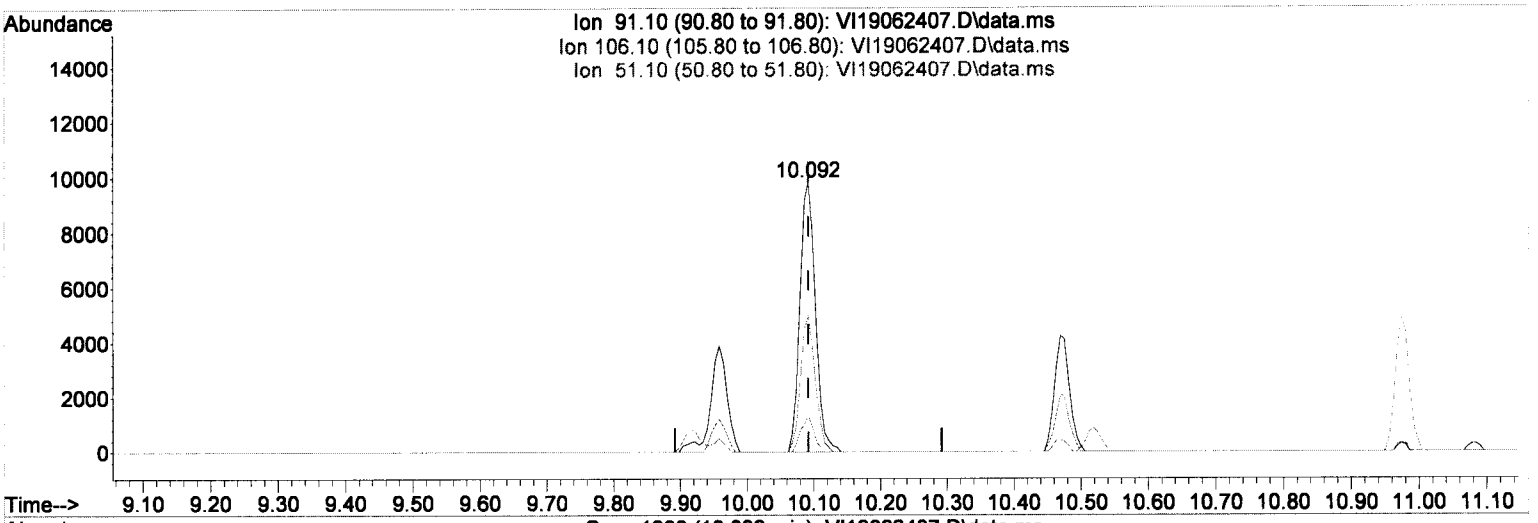
Ion	Exp%	Act%
91.10	100.00	100.00
106.10	30.80	30.87
51.10	10.40	12.95
0.00	0.00	0.00

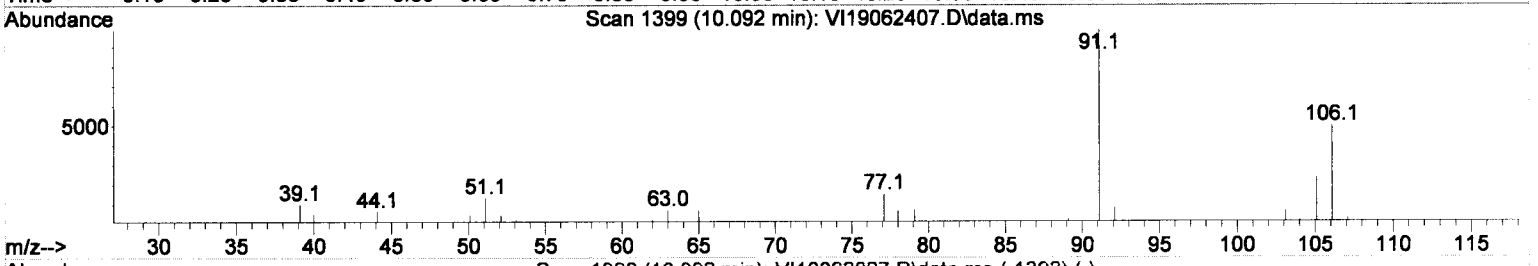
6/28/19 hm

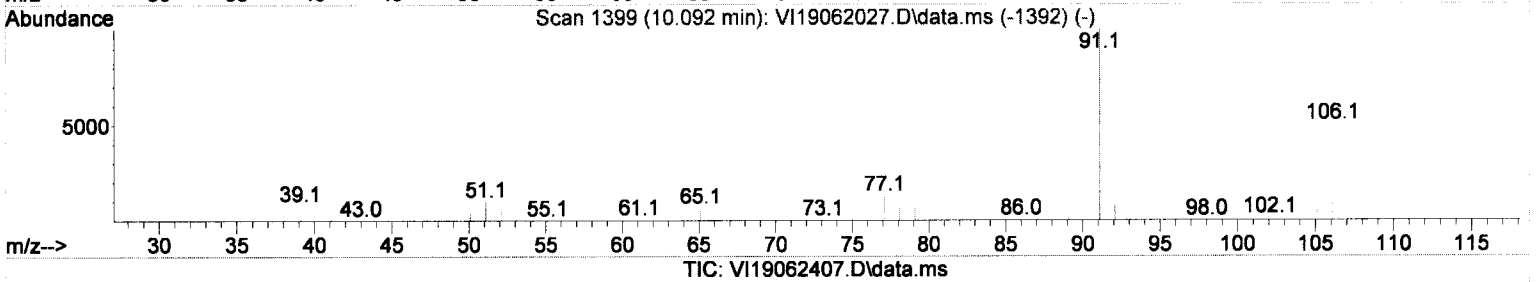
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062407.D
Acq On : 24 Jun 2019 11:15 am
Operator : TNL
Sample : A9F0692-02@100
Misc : 100X 500uL/50mL 8260C
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 14:22:00 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration







TIC: VI19062407.D\data.ms

(61) m,p-Xylenes (2)

10.092min (+ 0.000) 2.70 ug/L

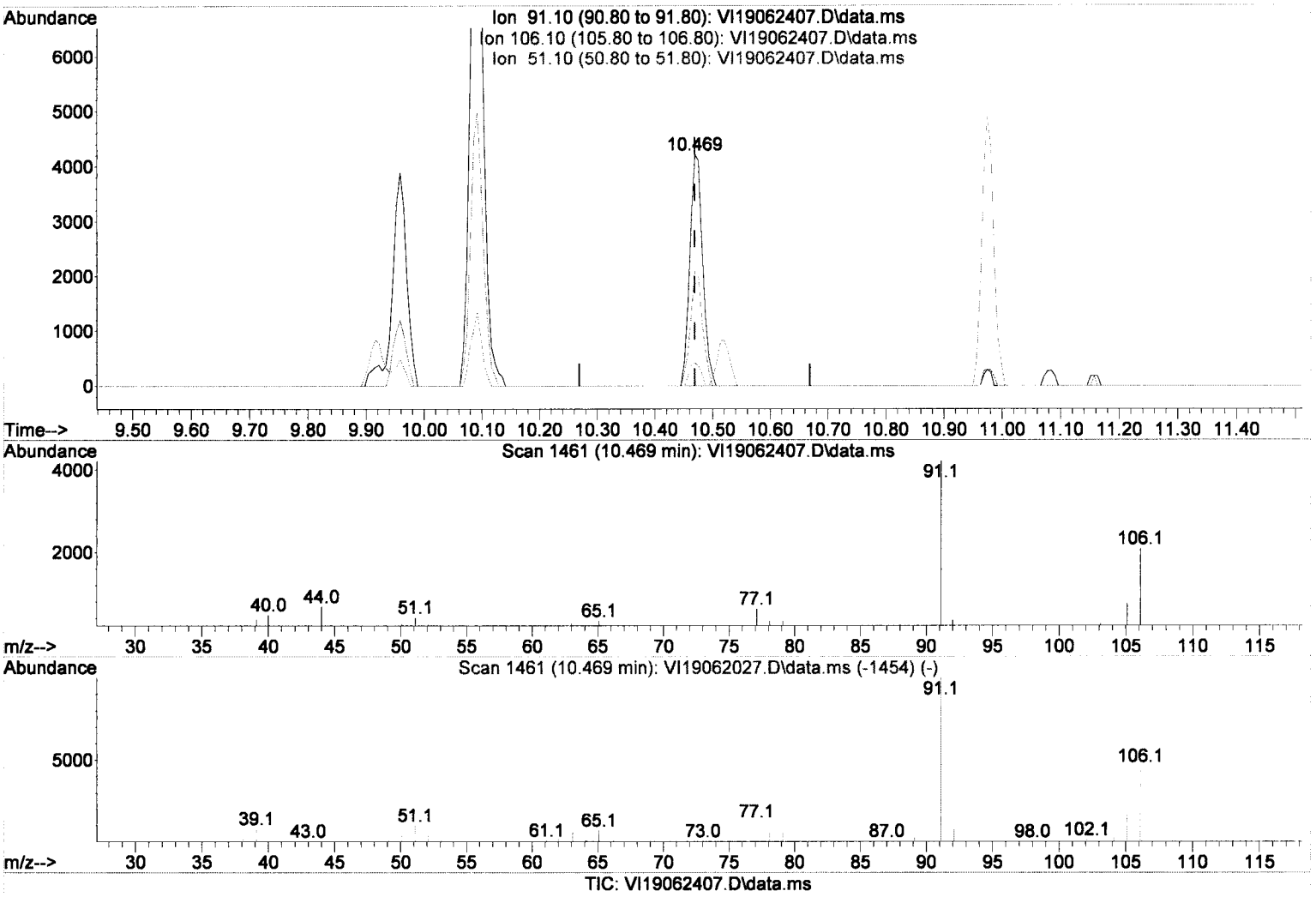
response 15832

Ion	Exp%	Act%
91.10	100.00	100.00
106.10	51.20	50.68
51.10	9.80	13.59
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062407.D
Acq On : 24 Jun 2019 11:15 am
Operator : TNL
Sample : A9F0692-02@100
Misc : 100X 500uL/50mL 8260C
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 14:22:00 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



TIC: VI19062407.D\data.ms

(62) o-Xylene

10.469min (+ 0.000) 1.10 ug/L

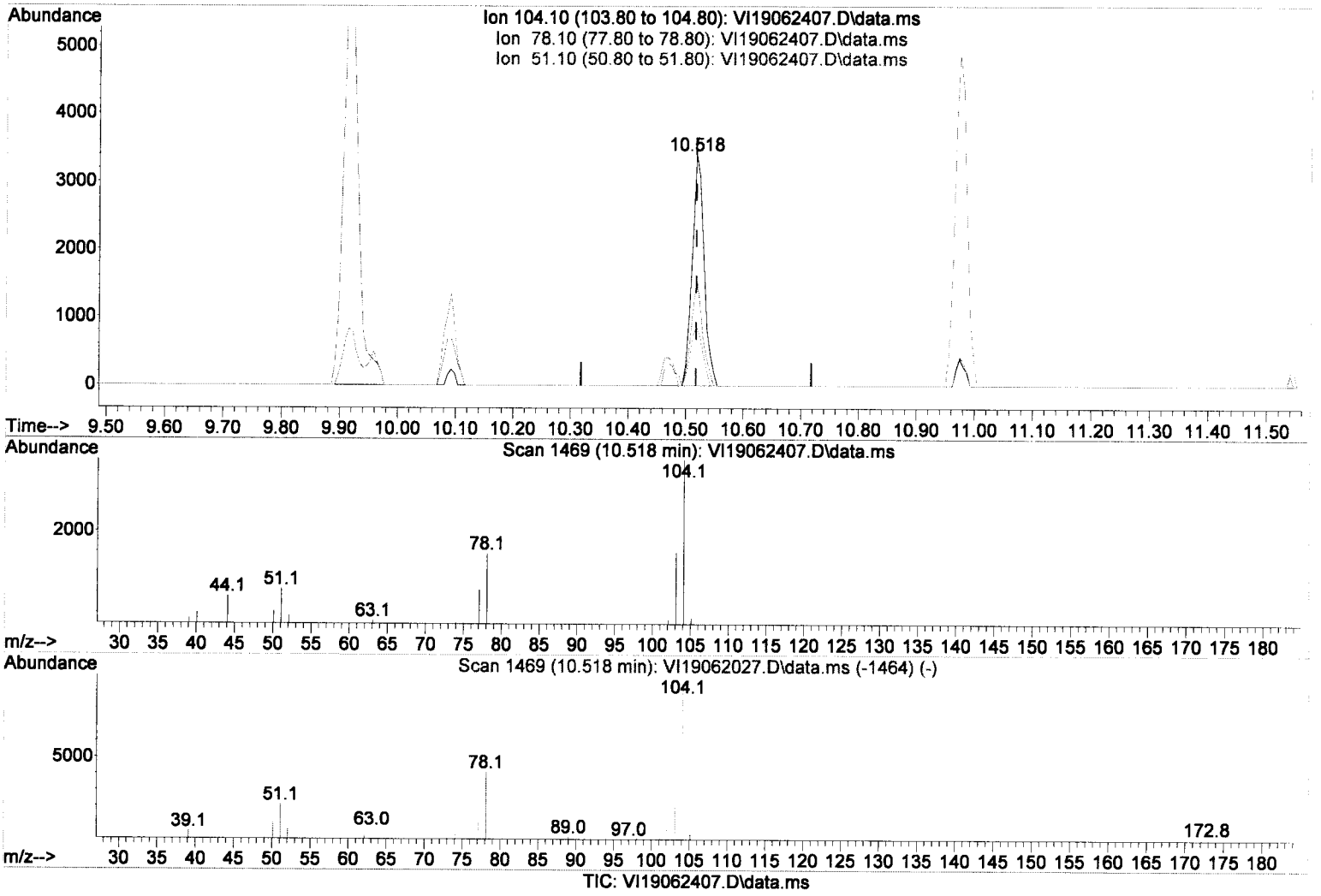
response 6570

Ion	Exp%	Act%
91.10	100.00	100.00
106.10	48.30	49.64
51.10	10.20	9.85
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062407.D
Acq On : 24 Jun 2019 11:15 am
Operator : TNL
Sample : A9F0692-02@100
Misc : 100X 500uL/50mL 8260C
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 14:22:00 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



TIC: VI19062407.D\data.ms

(63) Styrene

10.518min (-0.000) 1.08 ug/L

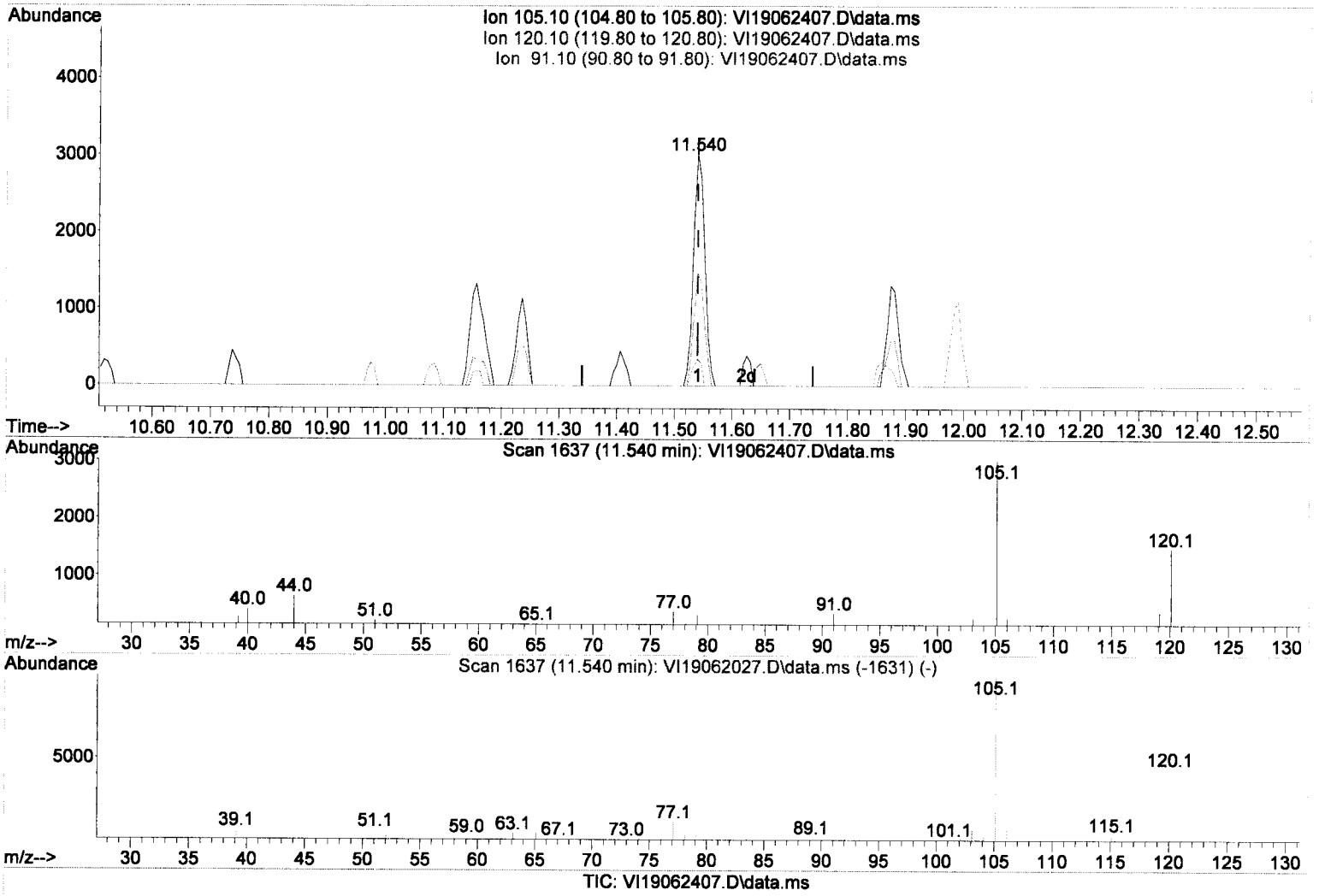
response 4929

Ion	Exp%	Act%
104.10	100.00	100.00
78.10	39.40	45.99
51.10	22.20	25.46
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062407.D
Acq On : 24 Jun 2019 11:15 am
Operator : TNL
Sample : A9F0692-02@100
Misc : 100X 500uL/50mL 8260C
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 14:22:00 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



TIC: VI19062407.D\data.ms

(77) 1,2,4-Trimethylbenzene

11.540min (-0.000) 0.75 ug/L

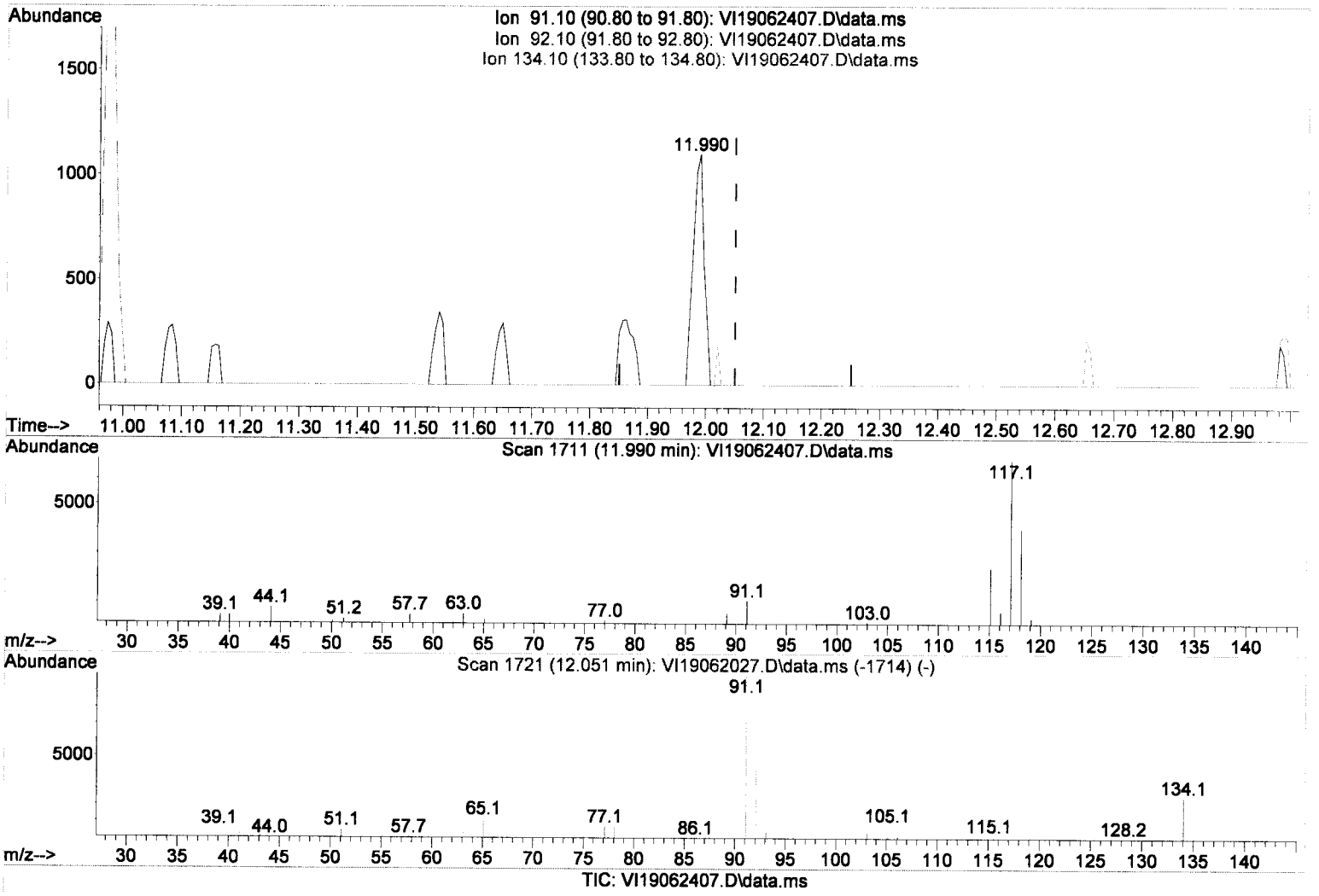
response 4066

Ion	Exp%	Act%
105.10	100.00	100.00
120.10	49.80	48.87
91.10	10.50	11.50
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062407.D
Acq On : 24 Jun 2019 11:15 am
Operator : TNL
Sample : A9F0692-02@100
Misc : 100X 500uL/50mL 8260C
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 14:22:00 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



TIC: VI19062407.D\data.ms

(82) n-Butylbenzene

11.990min (-0.061) 0.30 ug/L

response 1456

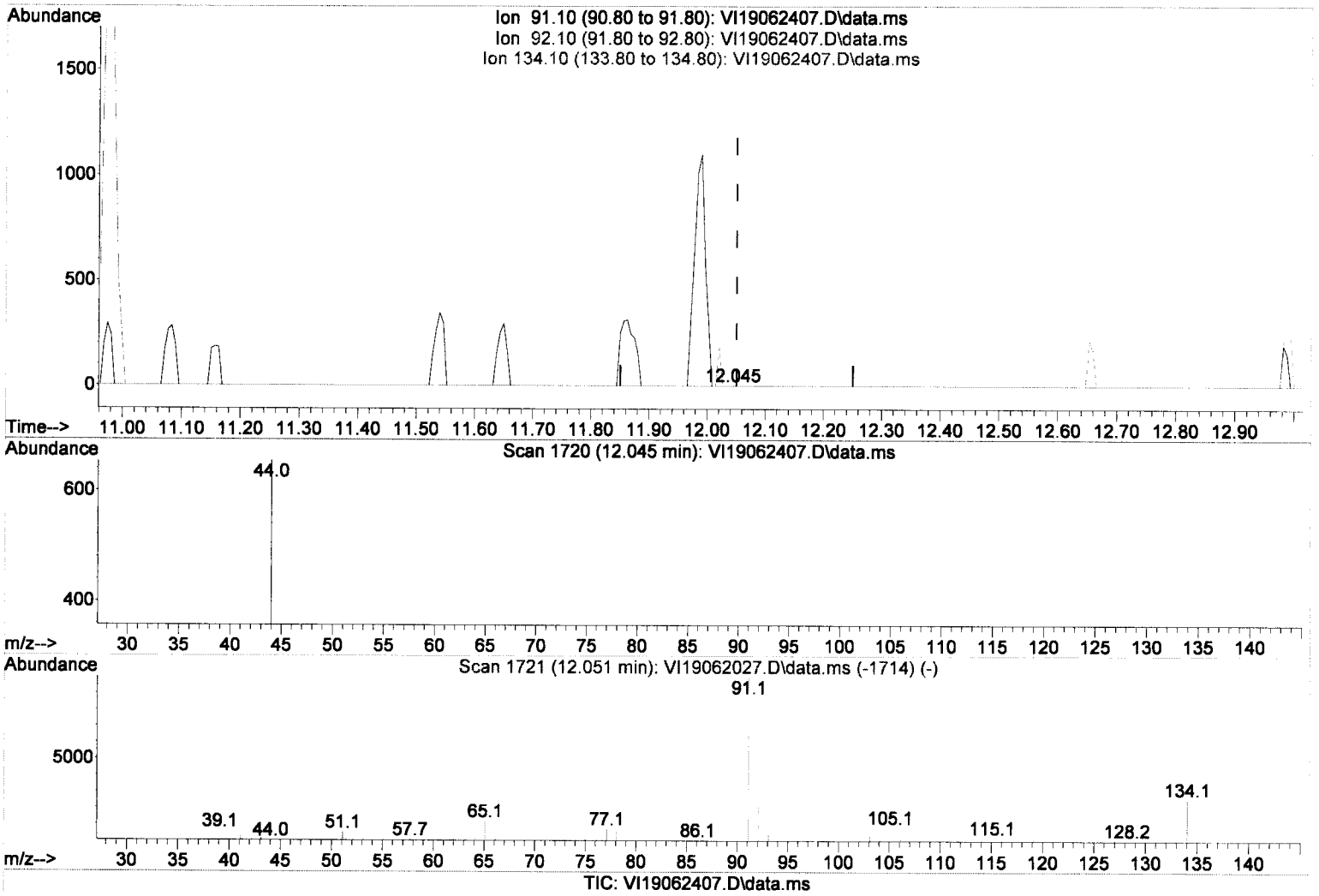
Ion	Exp%	Act%
91.10	100.00	100.00
92.10	55.90	0.00#
134.10	28.20	0.00
0.00	0.00	0.00

MD 6/24/19

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062407.D
Acq On : 24 Jun 2019 11:15 am
Operator : TNL
Sample : A9F0692-02@100
Misc : 100X 500uL/50mL 8260C
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 14:22:00 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



TIC: VI19062407.D\data.ms

(82) n-Butylbenzene

12.045min (-0.006) 0.00 ug/L m

response 0

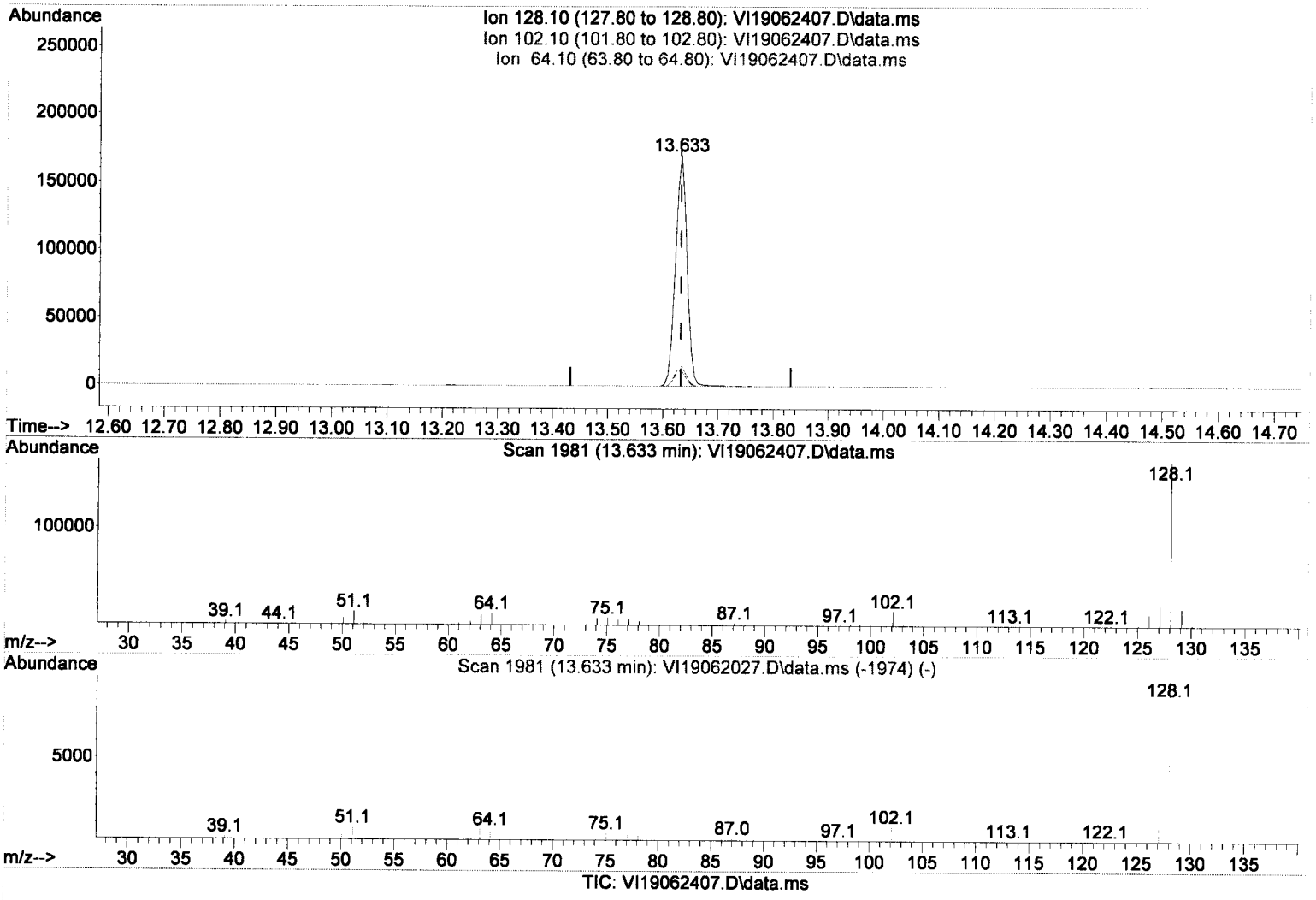
Ion	Exp%	Act%
91.10	100.00	0.00
92.10	55.90	0.00#
134.10	28.20	0.00
0.00	0.00	0.00

0 NL 6/24/19 hw

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062407.D
Acq On : 24 Jun 2019 11:15 am
Operator : TNL
Sample : A9F0692-02@100
Misc : 100X 500uL/50mL 8260C
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 14:22:00 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



(87) Naphthalene

13.633min (+ 0.001) 43.24 ug/L

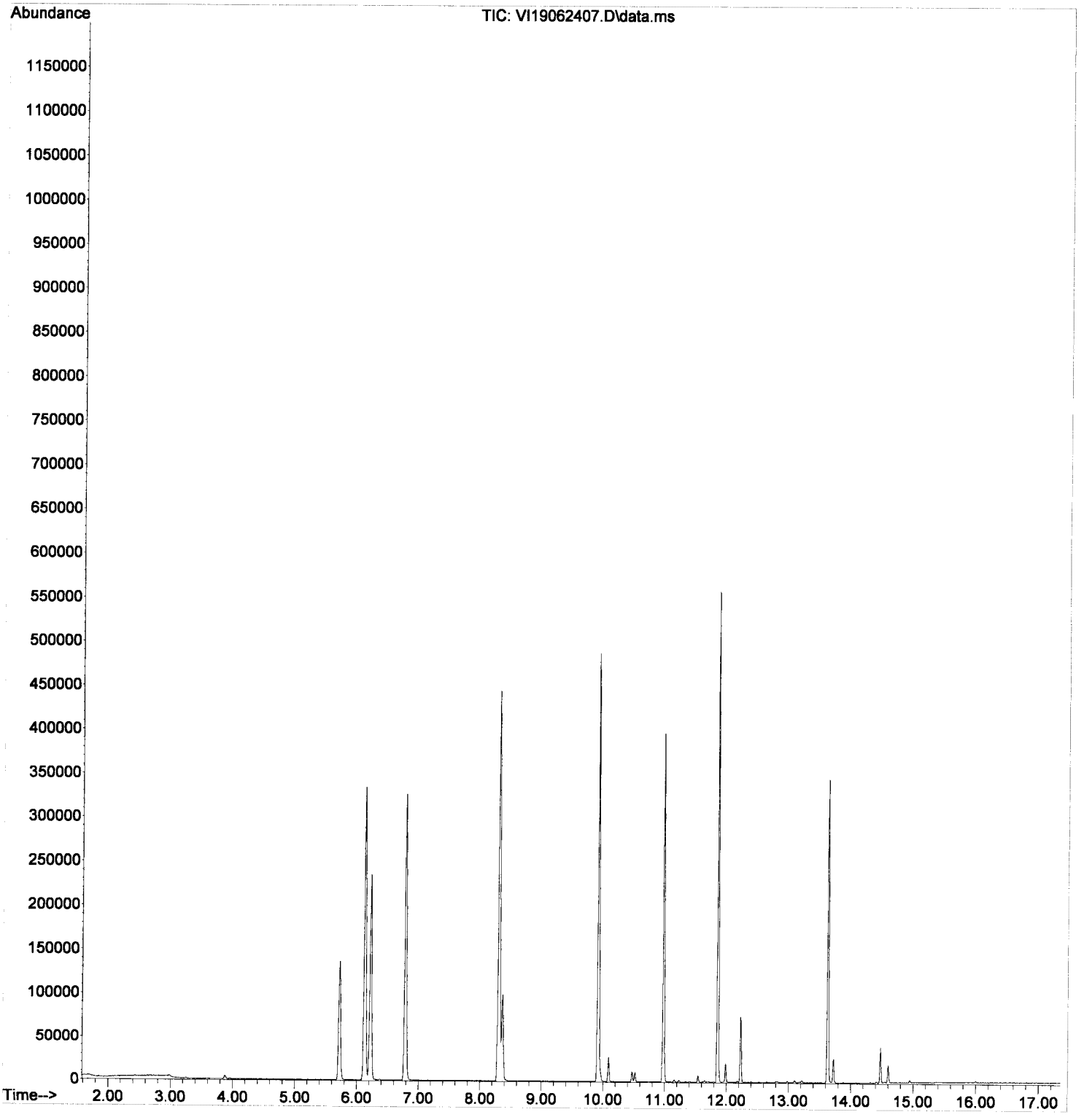
response 249625

Ion	Exp%	Act%
128.10	100.00	100.00
102.10	7.60	8.78
64.10	4.70	6.98
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062407.D
Acq On : 24 Jun 2019 11:15 am
Operator : TNL
Sample : A9F0692-02@100
Misc : 100X 500uL/50mL 8260C
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 14:22:00 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062408.D
Acq On : 24 Jun 2019 11:42 am
Operator : TNL
Sample : A9F0692-03@100
Misc : 100X 500uL/50mL 8260C
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 14:22:04 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.223	168	168891	50.00 ug/L		0.00
45) Chlorobenzene-d5 (I)	9.916	117	252464	50.00 ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	11.856	152	112024	50.00 ug/L		0.00
System Monitoring Compounds						
32) Dibromofluoromethane (S)	5.718	111	92131	50.60 ug/L		0.00
39) 1,4-Difluorobenzene (S)	6.789	114	285025	50.70 ug/L		0.00
48) Toluene-d8 (S)	8.304	98	334133	50.65 ug/L		0.00
67) 4-Bromofluorobenzene (S)	10.980	174	93752	50.51 ug/L		0.00
Target Compounds						Qvalue
3) Chloromethane	1.898	50	230	0.10 ug/L	#	47
6) Chloroethane	2.512	64	116	0.16 ug/L	#	36
14) Methylene Chloride	3.881	84	1836	Below Cal		91
15) Acetone	3.942	43	422	0.51 ug/L	#	44
35) Benzene	6.126	78	36042	5.12 ug/L		96
49) Toluene	8.364	91	9605	1.33 ug/L		98
59) Ethylbenzene	9.958	91	1760	0.23 ug/L		91
61) m,p-Xylenes (2)	10.092	91	2512	0.44 ug/L		91
62) o-Xylene	10.475	91	994	0.17 ug/L		92
63) Styrene	10.518	104	542	0.12 ug/L		89
77) 1,2,4-Trimethylbenzene	11.540	105	706	0.14 ug/L		78
78) sec-Butylbenzene	11.540	105	706	0.11 ug/L		59
82) n-Butylbenzene	11.984	91	732	0.16 ug/L	#	31
87) Naphthalene	13.633	128	58578	10.70 ug/L		94

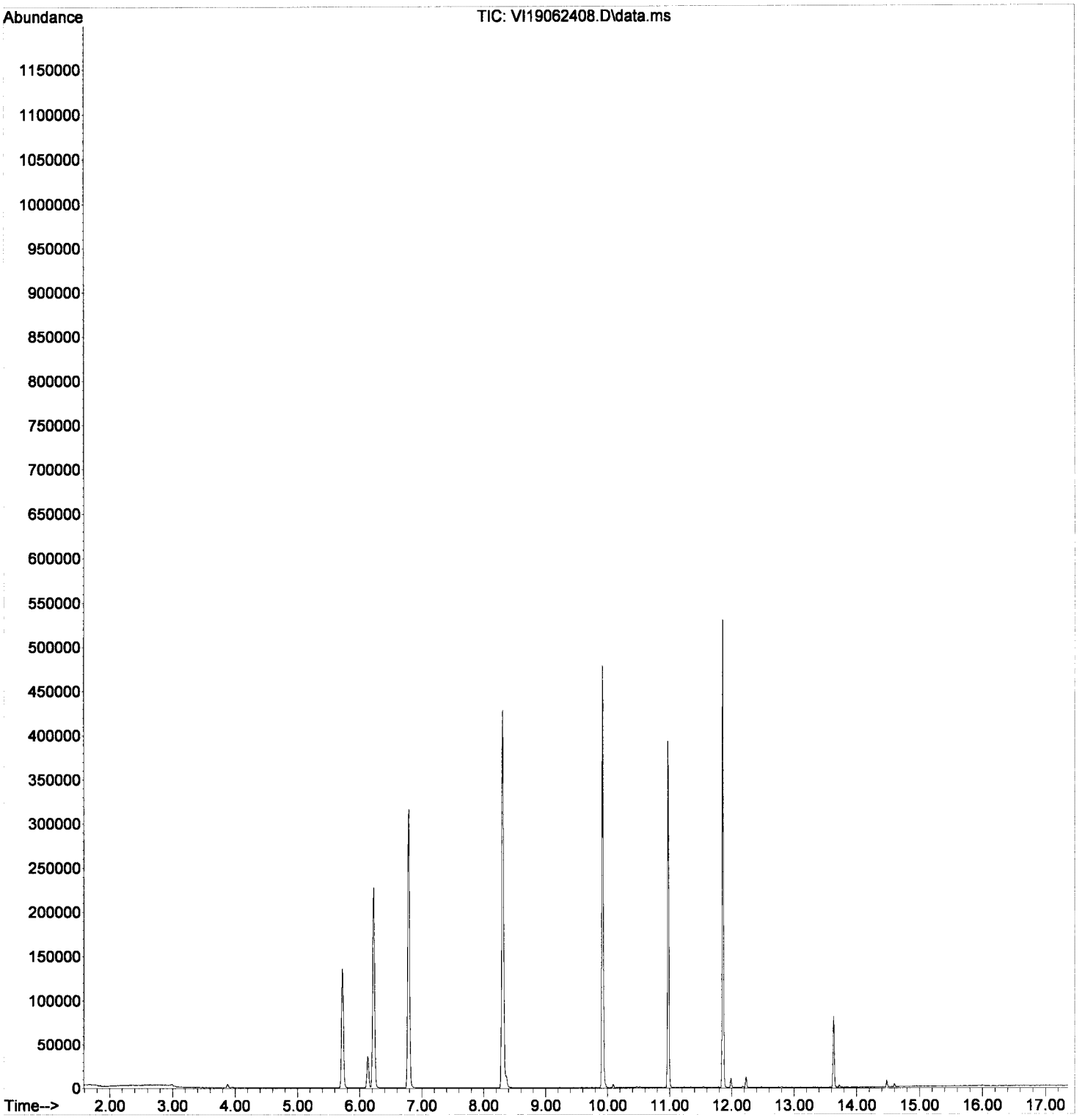
(#) = qualifier out of range (m) = manual integration (+) = signals summed

PR01
6/24/19 tm1

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062408.D
Acq On : 24 Jun 2019 11:42 am
Operator : TNL
Sample : A9F0692-03@100
Misc : 100X 500uL/50mL 8260C
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 14:22:04 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062416.D
Acq On : 24 Jun 2019 3:19 pm
Operator : TNL
Sample : 9061200-DUP1
Misc : 1X 5mL A9F0709-01
ALS Vial : 16 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 16:15:36 2019
Quant Method : C:\msdchem\1\methods\VI190621G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Jun 21 11:04:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.223	168	160904	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.789	114	271545	50.18	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.980	174	91420	48.60	ug/L	0.00
9) Toluene-d8 (NR)	8.303	98	319433	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.916	117	243046	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.856	150	168341	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.890	TIC	-9058m	23.47	ug/L	
5) TPHg (C5-C9)	9.890	TIC	295783m	18.05	ug/L	
6) TPHg (C6-C10)	9.890	TIC	241823m	16.90	ug/L	
7) CA-LUFT (C5-C12)	9.890	TIC	327478m	21.26	ug/L	

6/24/19 tnl

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062416.D
Acq On : 24 Jun 2019 3:19 pm
Operator : TNL
Sample : 9061200-DUP1
Misc : 1X 5mL A9F0709-01
ALS Vial : 16 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 16:10:46 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Pentafluorobenzene (I)	6.223	168	160904	50.00 ug/L	0.00
45) Chlorobenzene-d5 (I)	9.916	117	243046	50.00 ug/L	0.00
66) 1,4-Dichlorobenzene-d4...	11.856	152	108513	50.00 ug/L	0.00
System Monitoring Compounds					
32) Dibromofluoromethane (S)	5.724	111	88138	50.81 ug/L	0.00
39) 1,4-Difluorobenzene (S)	6.789	114	271545	50.70 ug/L	0.00
48) Toluene-d8 (S)	8.303	98	319077	50.25 ug/L	0.00
67) 4-Bromofluorobenzene (S)	10.980	174	91420	50.85 ug/L	0.00
Target Compounds					Qvalue
3) Chloromethane	1.904	50	453	0.21 ug/L #	47
6) Chloroethane	2.500	64	705	1.04 ug/L #	36
9) 1,1-Dichloroethene	3.248	61	361	0.17 ug/L #	70
14) Methylene Chloride	3.887	84	652	Below Cal	94
15) Acetone	3.954	43	6164	7.87 ug/L	94
21) 1,1-Dichloroethane	4.696	63	4161	1.49 ug/L	95

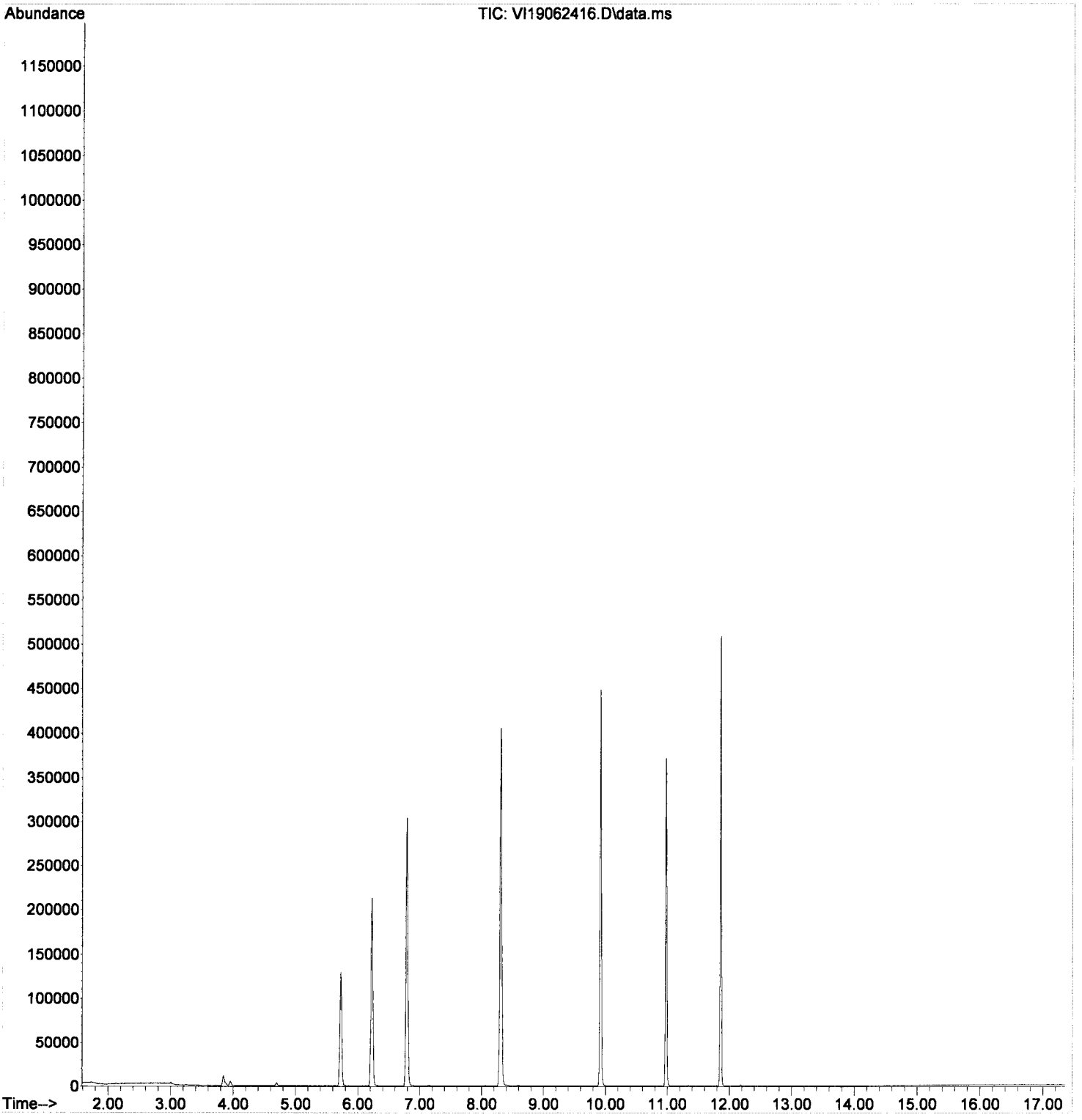
(#) = qualifier out of range (m) = manual integration (+) = signals summed

6/24/19 bm

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062416.D
Acq On : 24 Jun 2019 3:19 pm
Operator : TNL
Sample : 9061200-DUP1
Misc : 1X 5mL A9F0709-01
ALS Vial : 16 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 16:10:46 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062425.D
Acq On : 24 Jun 2019 7:22 pm
Operator : TNL
Sample : A9F0692-03RE1@10
Misc : 10X 5mL/50mL 8260C RR-01
ALS Vial : 25 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 25 07:31:55 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Pentafluorobenzene (I)	6.223	168	150858	50.00 ug/L	0.00
45) Chlorobenzene-d5 (I)	9.916	117	226275	50.00 ug/L	0.00
66) 1,4-Dichlorobenzene-d4...	11.856	152	105684	50.00 ug/L	0.00
System Monitoring Compounds					
32) Dibromofluoromethane (S)	5.718	111	83055	51.07 ug/L	0.00
39) 1,4-Difluorobenzene (S)	6.789	114	253964	50.58 ug/L	0.00
48) Toluene-d8 (S)	8.303	98	298389	50.47 ug/L	0.00
67) 4-Bromofluorobenzene (S)	10.980	174	85048	48.57 ug/L	0.00
Target Compounds					Qvalue
6) Chloroethane	2.506	64	634	1.00 ug/L	36
10) Carbon Disulfide	3.254	76	427	0.12 ug/L	78
14) Methylene Chloride	3.875	84	1765	Below Cal	97
15) Acetone	3.948	43	7836	10.67 ug/L	99
35) Benzene	6.126	78	283611	45.07 ug/L	98
49) Toluene	8.364	91	81844	12.68 ug/L	98
59) Ethylbenzene	9.958	91	15277	2.26 ug/L	99
61) m,p-Xylenes (2)	10.092	91	23190	4.55 ug/L	95
62) o-Xylene	10.469	91	9429	1.82 ug/L	94
63) Styrene	10.518	104	5807	1.46 ug/L	90
65) Isopropylbenzene	10.737	105	1037	0.17 ug/L	84
72) 1,3,5-Trimethylbenzene	11.236	105	2490	0.51 ug/L	97
76) tert-Butylbenzene	11.540	91	596	0.21 ug/L	52
77) 1,2,4-Trimethylbenzene	11.540	105	6184	1.27 ug/L	92
78) sec-Butylbenzene	11.625	105	565	0.09 ug/L	58
82) n-Butylbenzene	11.984	91	7692	1.76 ug/L #	42
87) Naphthalene	13.633	128	682143	132.05 ug/L	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

6/25/19 MK

ME 2.19 ppb ✓

ME ND

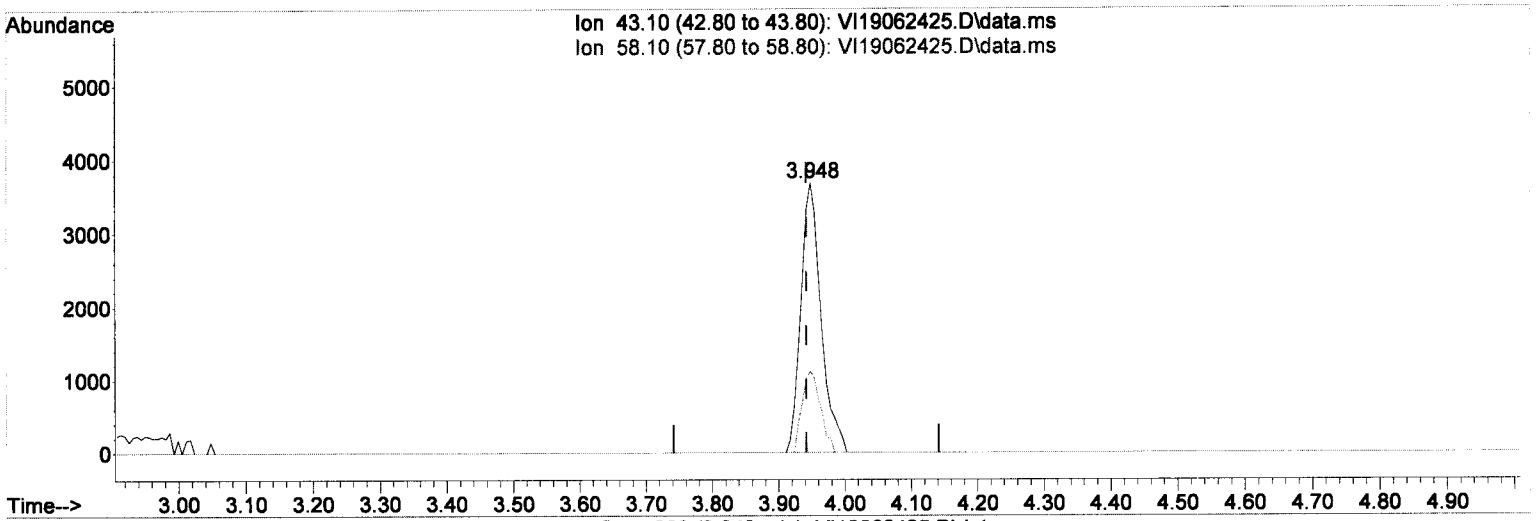
ME ND

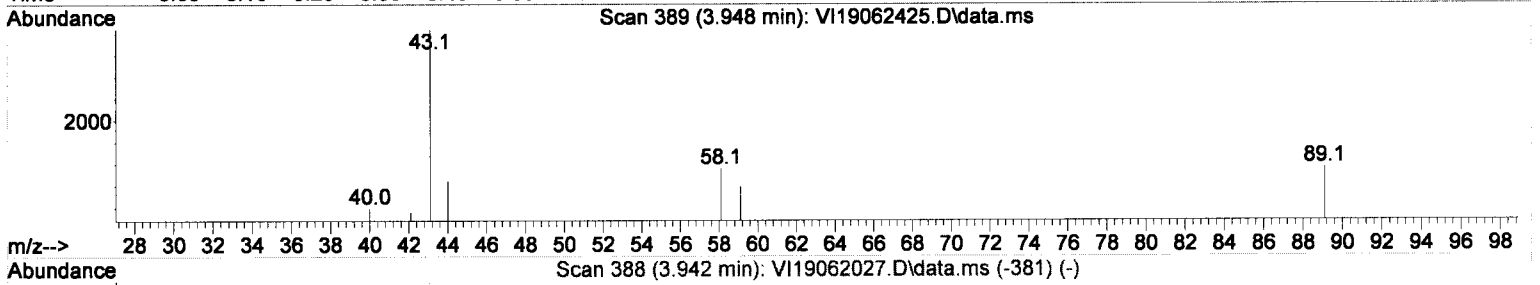
Matched 100X —

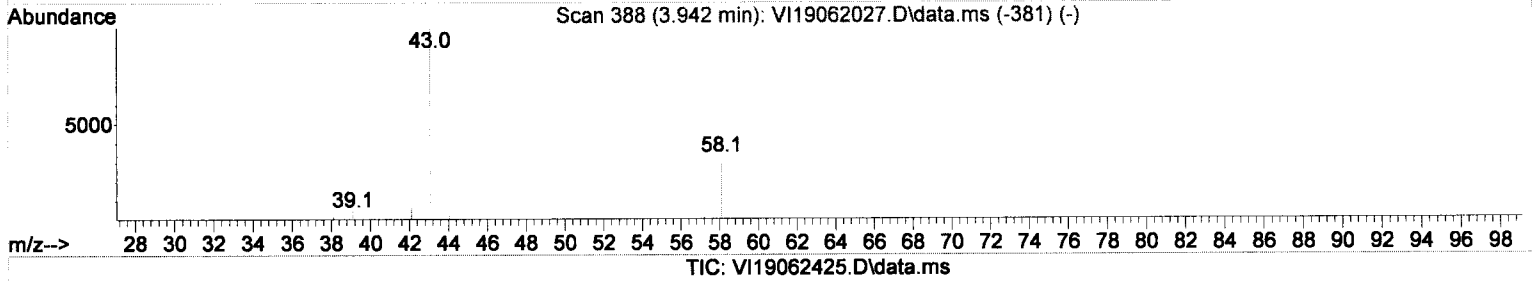
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062425.D
Acq On : 24 Jun 2019 7:22 pm
Operator : TNL
Sample : A9F0692-03RE1@10
Misc : 10X 5mL/50mL 8260C RR-01
ALS Vial : 25 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 25 07:31:55 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration







TIC: VI19062425.D\data.ms

(15) Acetone

3.948min (+ 0.006) 10.67 ug/L

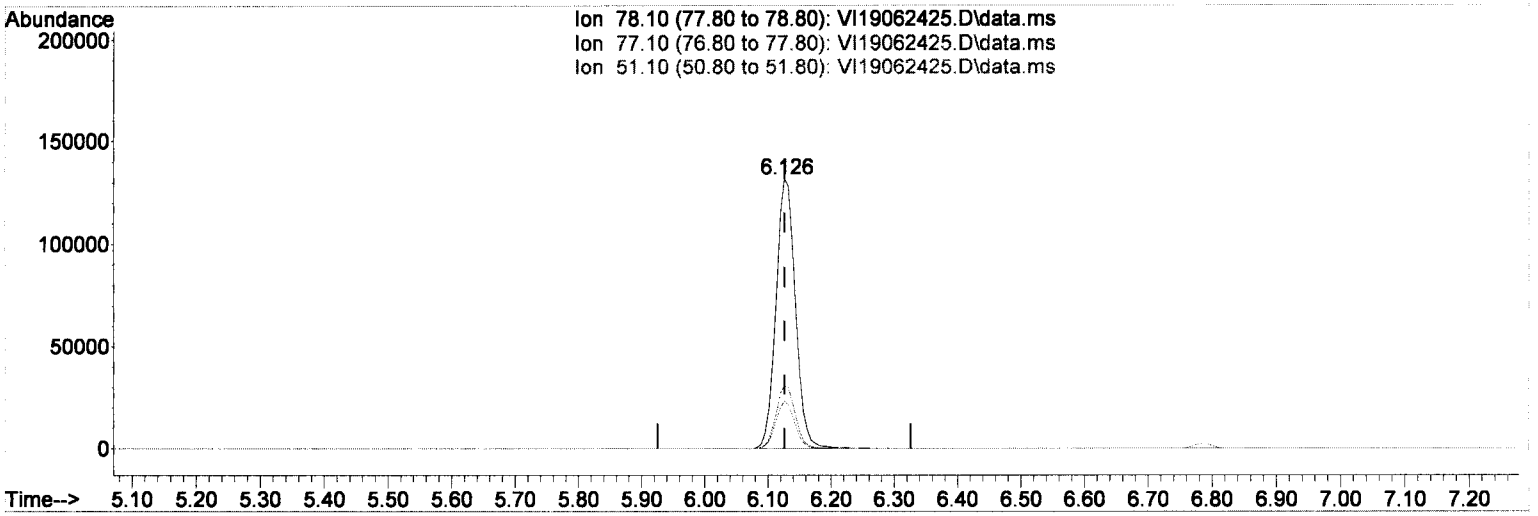
response 7836

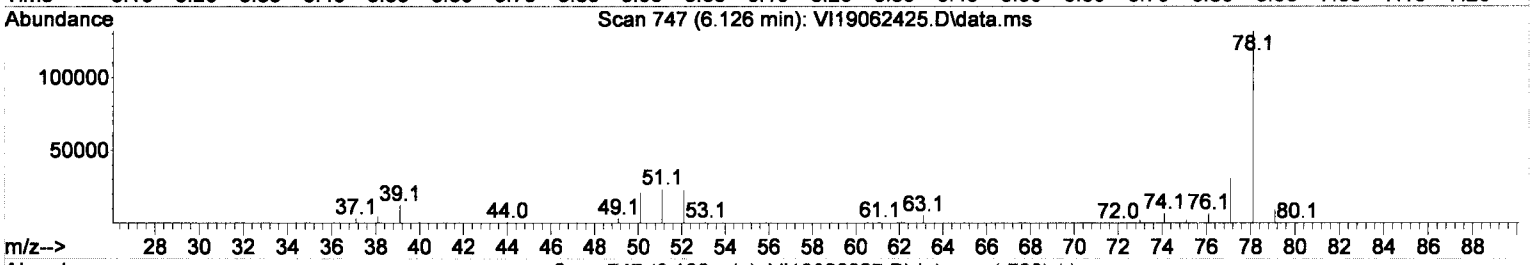
Ion	Exp%	Act%
43.10	100.00	100.00
58.10	30.80	30.28
0.00	0.00	0.00
0.00	0.00	0.00

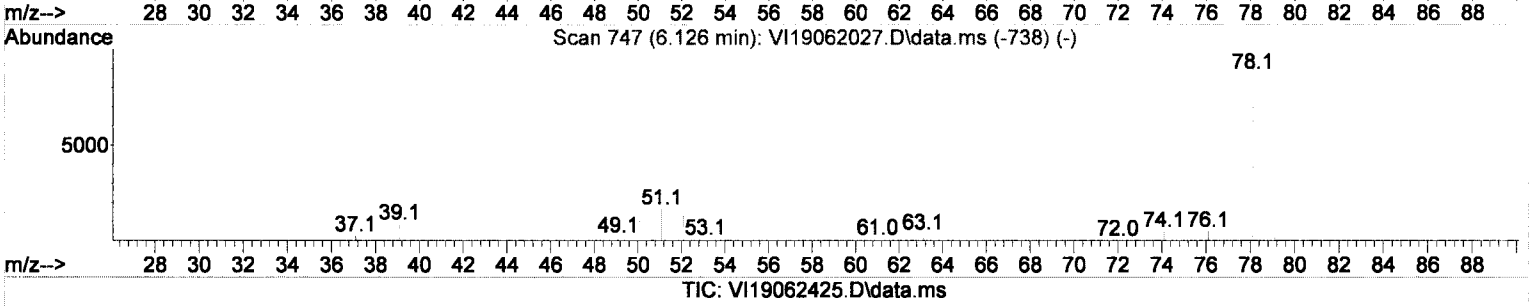
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062425.D
Acq On : 24 Jun 2019 7:22 pm
Operator : TNL
Sample : A9F0692-03RE1@10
Misc : 10X 5mL/50mL 8260C RR-01
ALS Vial : 25 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 25 07:31:55 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration







TIC: VI19062425.D\data.ms

(35) Benzene

6.126min (-0.000) 45.07 ug/L

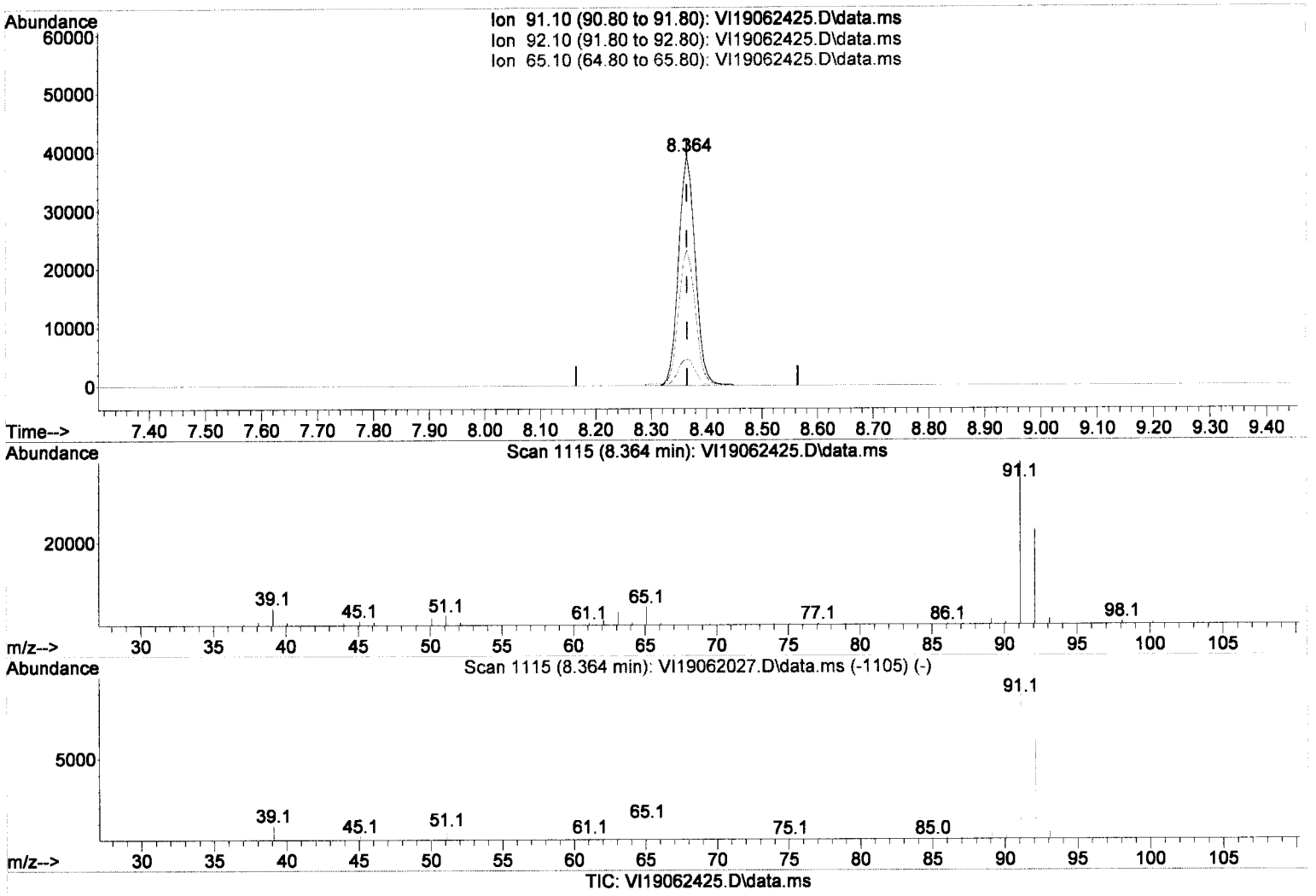
response 283611

Ion	Exp%	Act%
78.10	100.00	100.00
77.10	24.70	23.40
51.10	17.20	17.68
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062425.D
Acq On : 24 Jun 2019 7:22 pm
Operator : TNL
Sample : A9F0692-03RE1@10
Misc : 10X 5mL/50mL 8260C RR-01
ALS Vial : 25 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 25 07:31:55 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



TIC: VI19062425.D\data.ms

(49) Toluene (C)

8.364min (-0.000) 12.68 ug/L

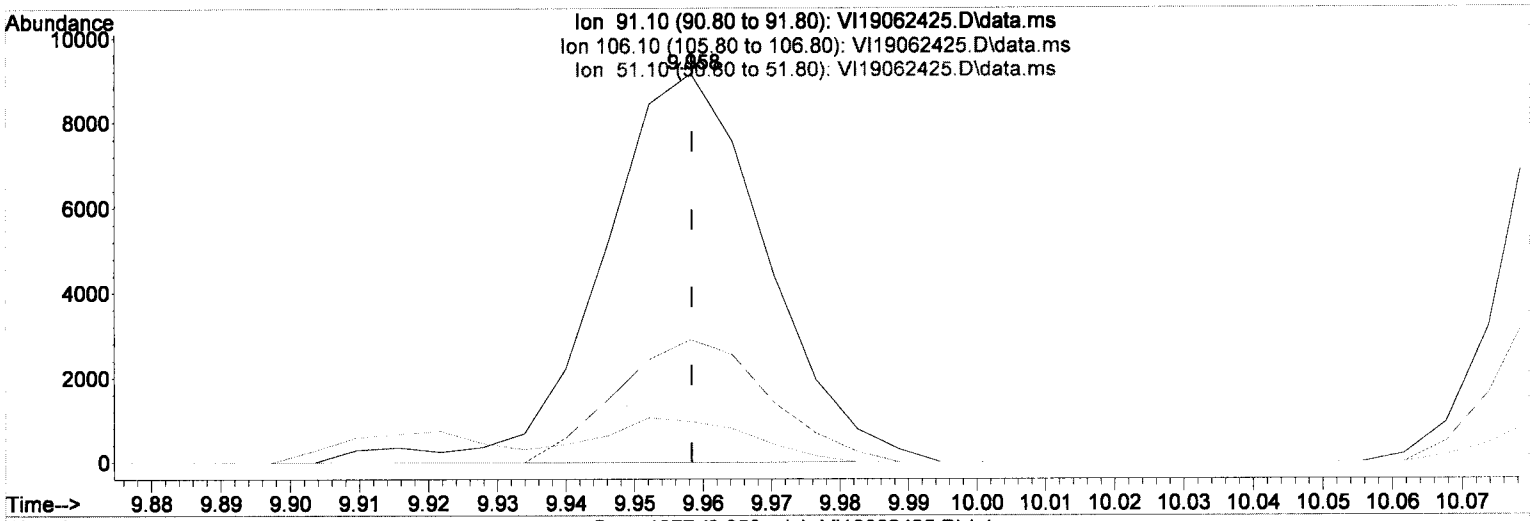
response 81844

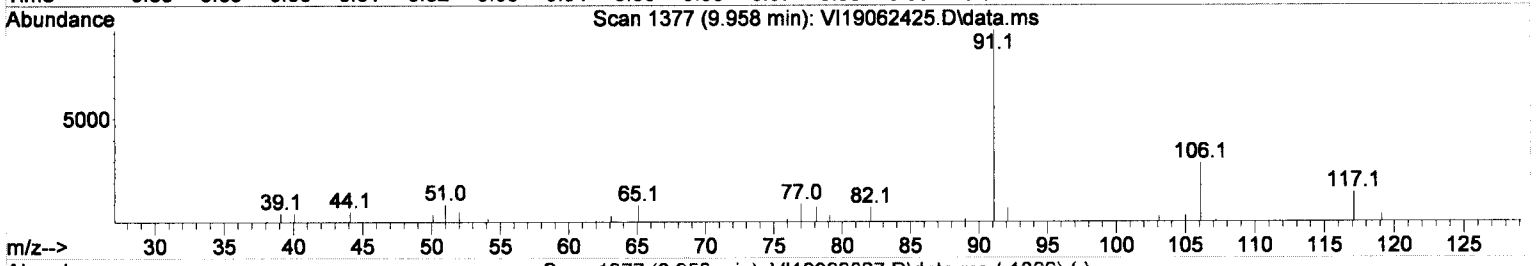
Ion	Exp%	Act%
91.10	100.00	100.00
92.10	59.80	58.61
65.10	10.30	11.40
0.00	0.00	0.00

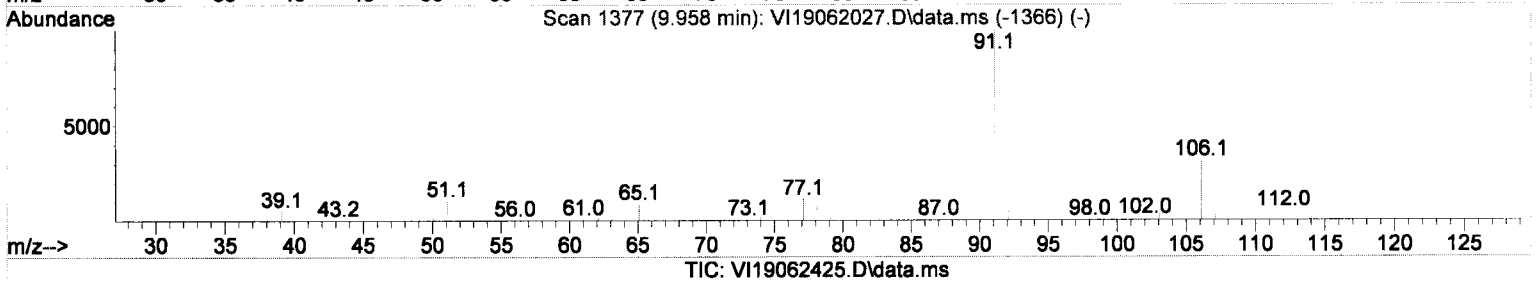
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062425.D
Acq On : 24 Jun 2019 7:22 pm
Operator : TNL
Sample : A9F0692-03RE1@10
Misc : 10X 5mL/50mL 8260C RR-01
ALS Vial : 25 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 25 07:31:55 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration







TIC: VI19062425.D\data.ms

(59) Ethylbenzene (C)

9.958min (-0.000) 2.26 ug/L

response 15277

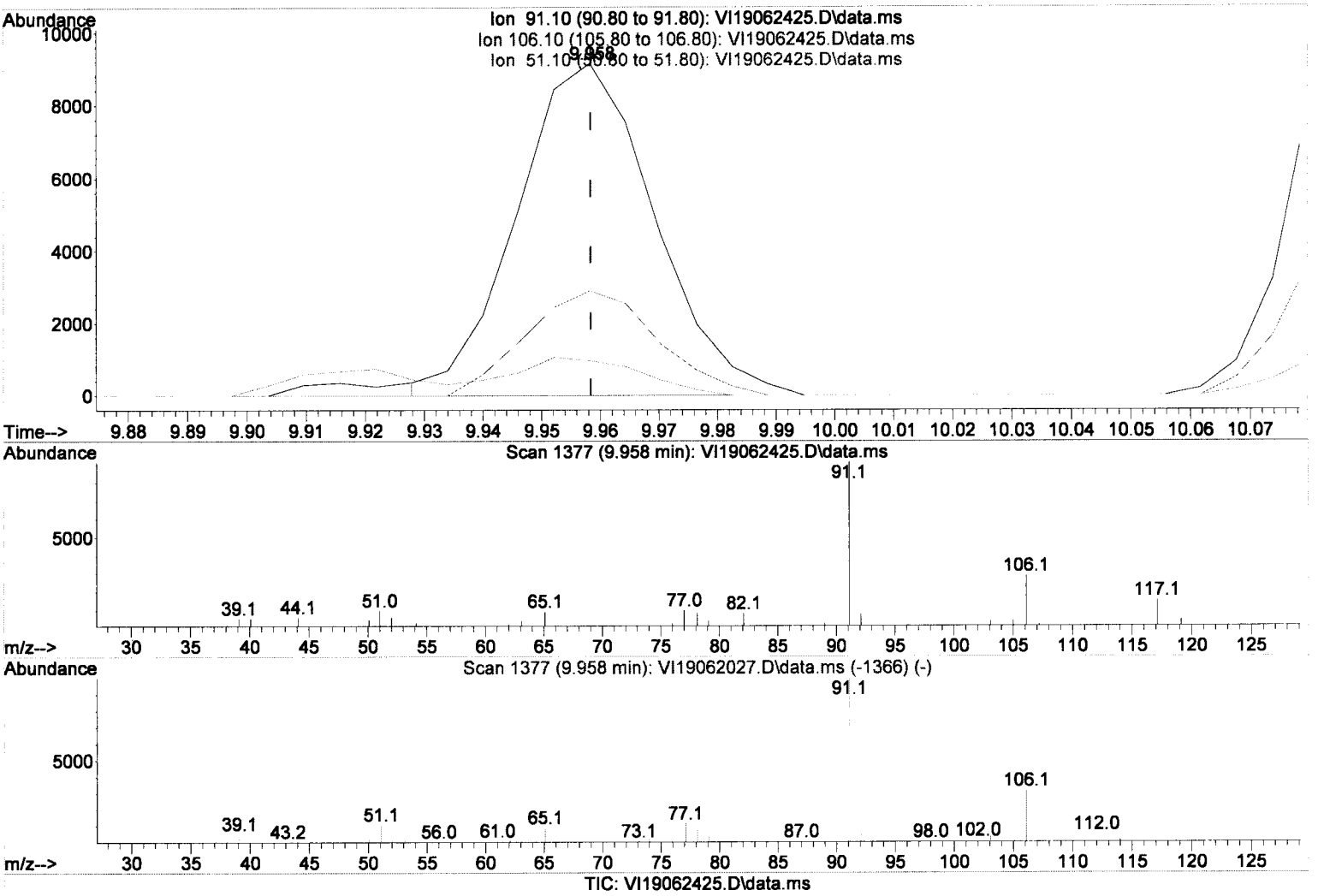
Ion	Exp%	Act%
91.10	100.00	100.00
106.10	30.80	31.60
51.10	10.40	10.56
0.00	0.00	0.00

(MC) 6/25/19 tm

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062425.D
Acq On : 24 Jun 2019 7:22 pm
Operator : TNL
Sample : A9F0692-03RE1@10
Misc : 10X 5mL/50mL 8260C RR-01
ALS Vial : 25 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 25 07:31:55 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



TIC: VI19062425.D\data.ms

(59) Ethylbenzene (C)

9.958min (-0.000) 2.19 ug/L m

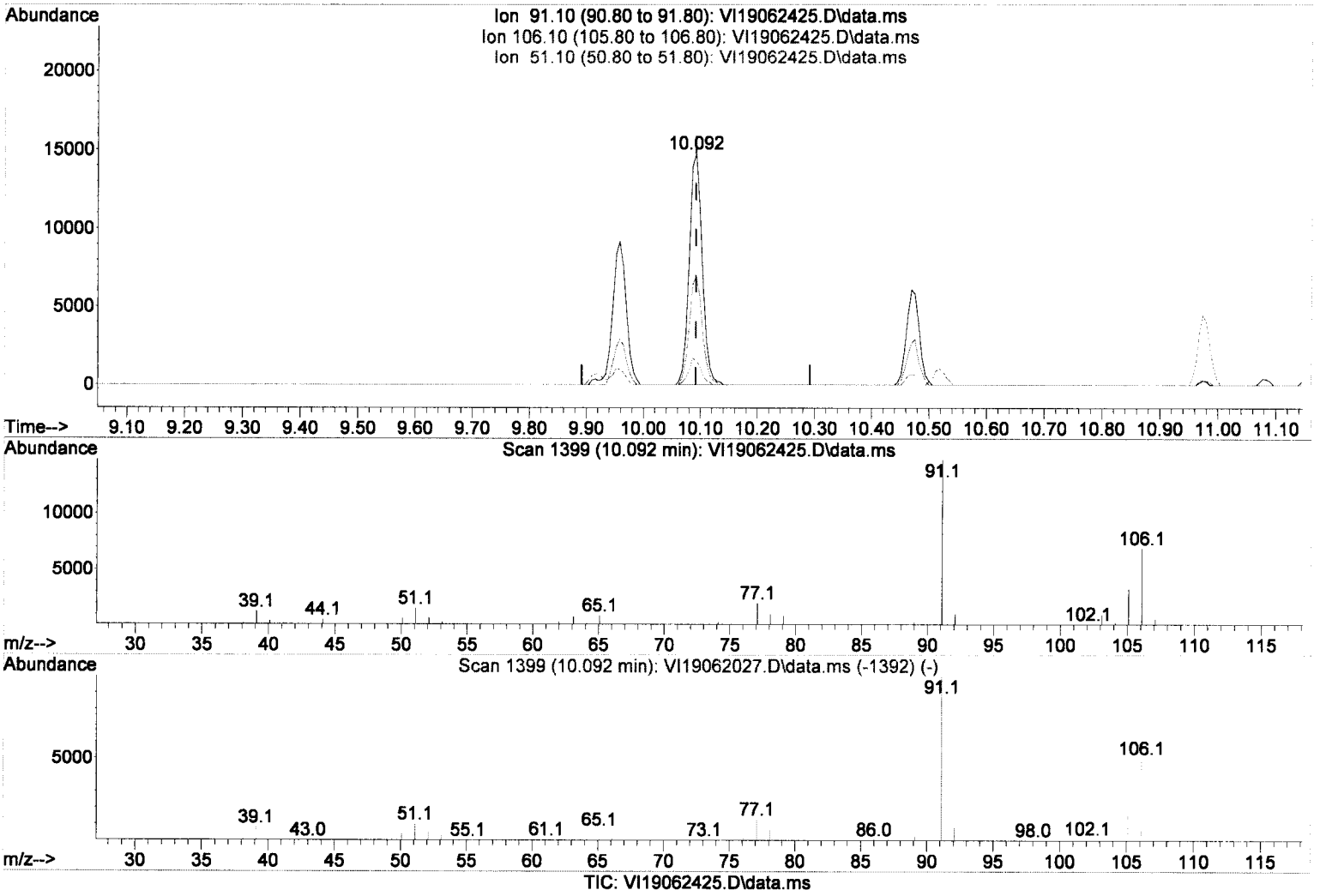
response 14816

Ion	Exp%	Act%
91.10	100.00	100.00
106.10	30.80	31.60
51.10	10.40	10.56
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062425.D
Acq On : 24 Jun 2019 7:22 pm
Operator : TNL
Sample : A9F0692-03RE1@10
Misc : 10X 5mL/50mL 8260C RR-01
ALS Vial : 25 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 25 07:31:55 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



TIC: VI19062425.D\data.ms

(61) m,p-Xylenes (2)

10.092min (+ 0.000) 4.55 ug/L

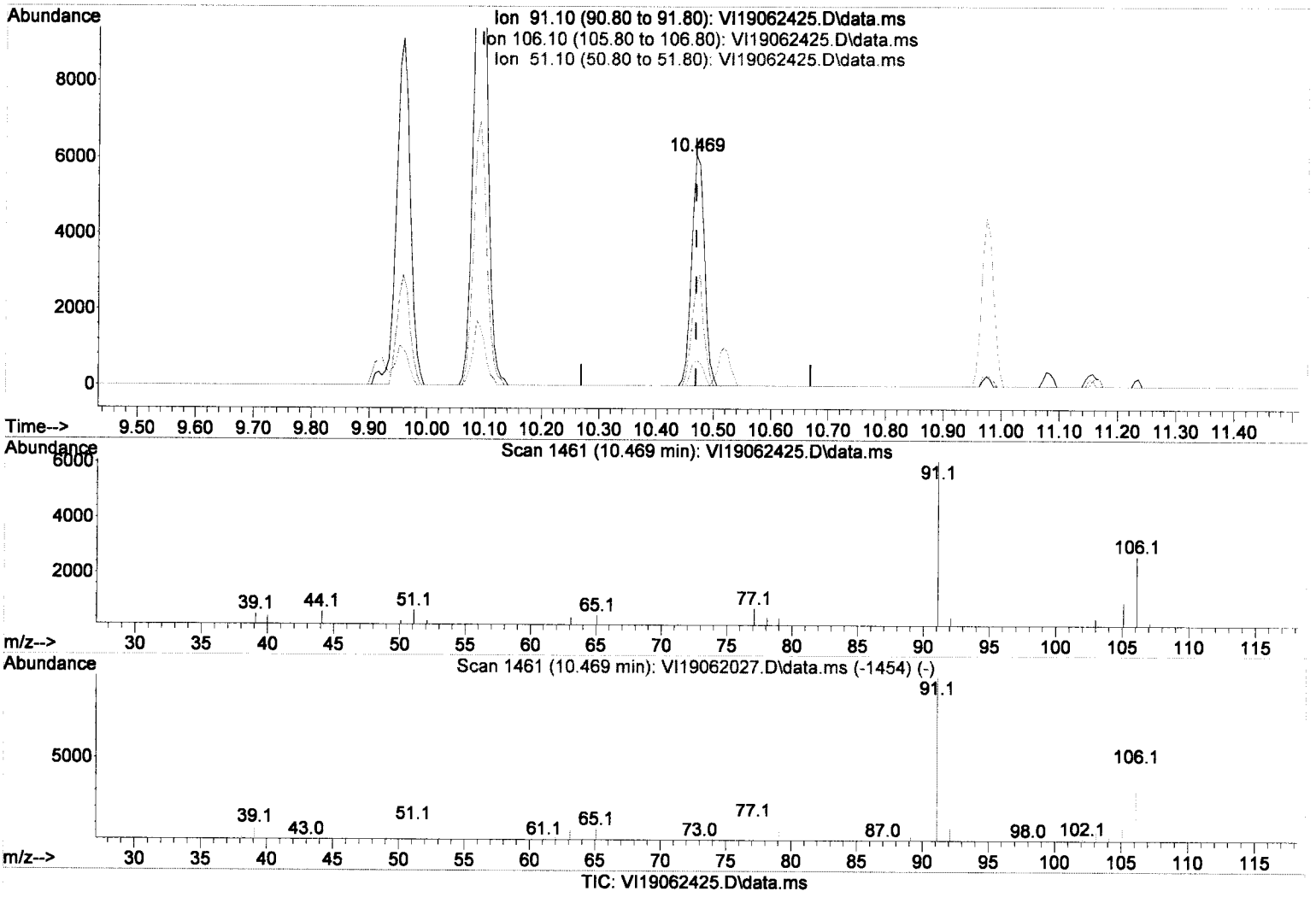
response 23190

Ion	Exp%	Act%
91.10	100.00	100.00
106.10	51.20	47.07
51.10	9.80	10.50
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062425.D
Acq On : 24 Jun 2019 7:22 pm
Operator : TNL
Sample : A9F0692-03RE1@10
Misc : 10X 5mL/50mL 8260C RR-01
ALS Vial : 25 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 25 07:31:55 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



TIC: VI19062425.D\data.ms

(62) o-Xylene

10.469min (+ 0.000) 1.82 ug/L

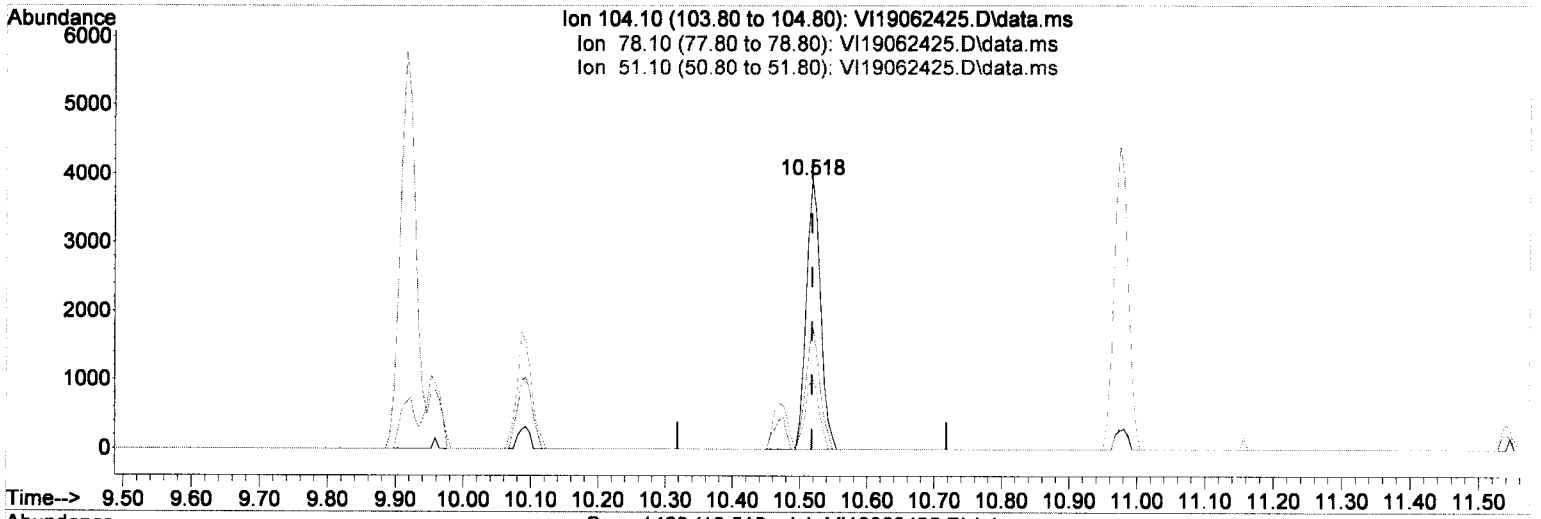
response 9429

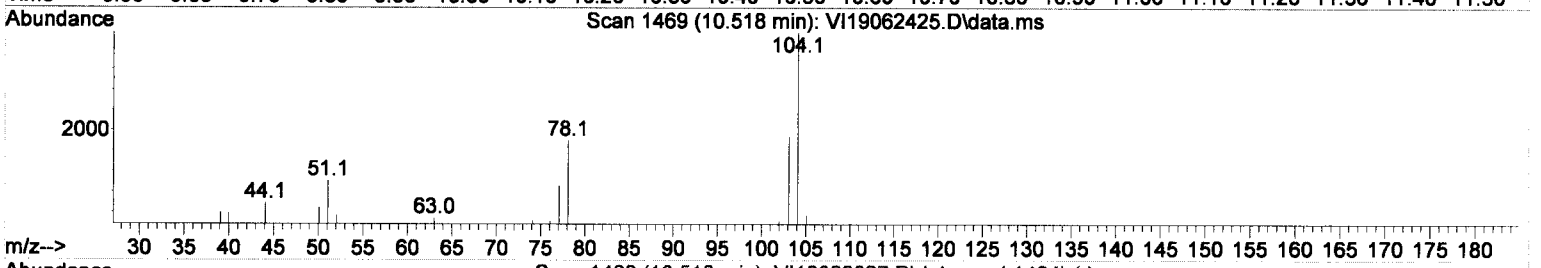
Ion	Exp%	Act%
91.10	100.00	100.00
106.10	48.30	43.98
51.10	10.20	10.96
0.00	0.00	0.00

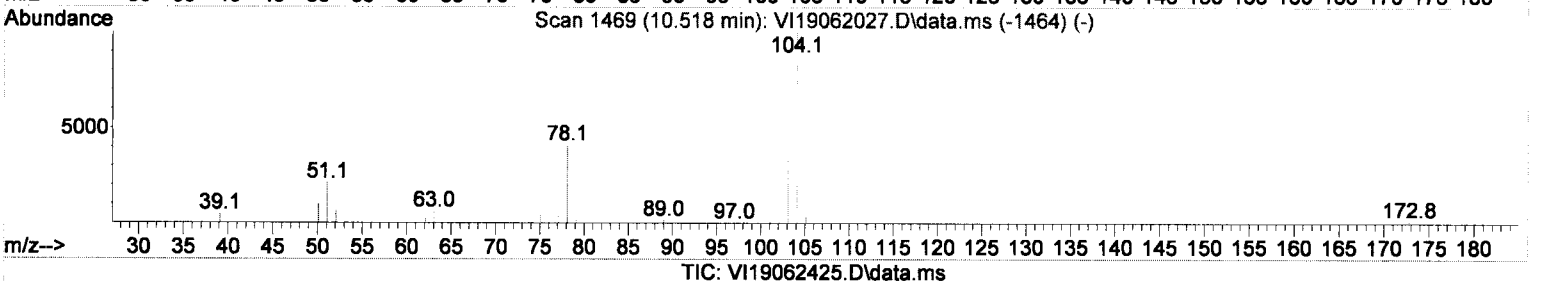
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062425.D
Acq On : 24 Jun 2019 7:22 pm
Operator : TNL
Sample : A9F0692-03RE1@10
Misc : 10X 5mL/50mL 8260C RR-01
ALS Vial : 25 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 25 07:31:55 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration







TIC: VI19062425.D\data.ms

(63) Styrene

10.518min (-0.000) 1.46 ug/L

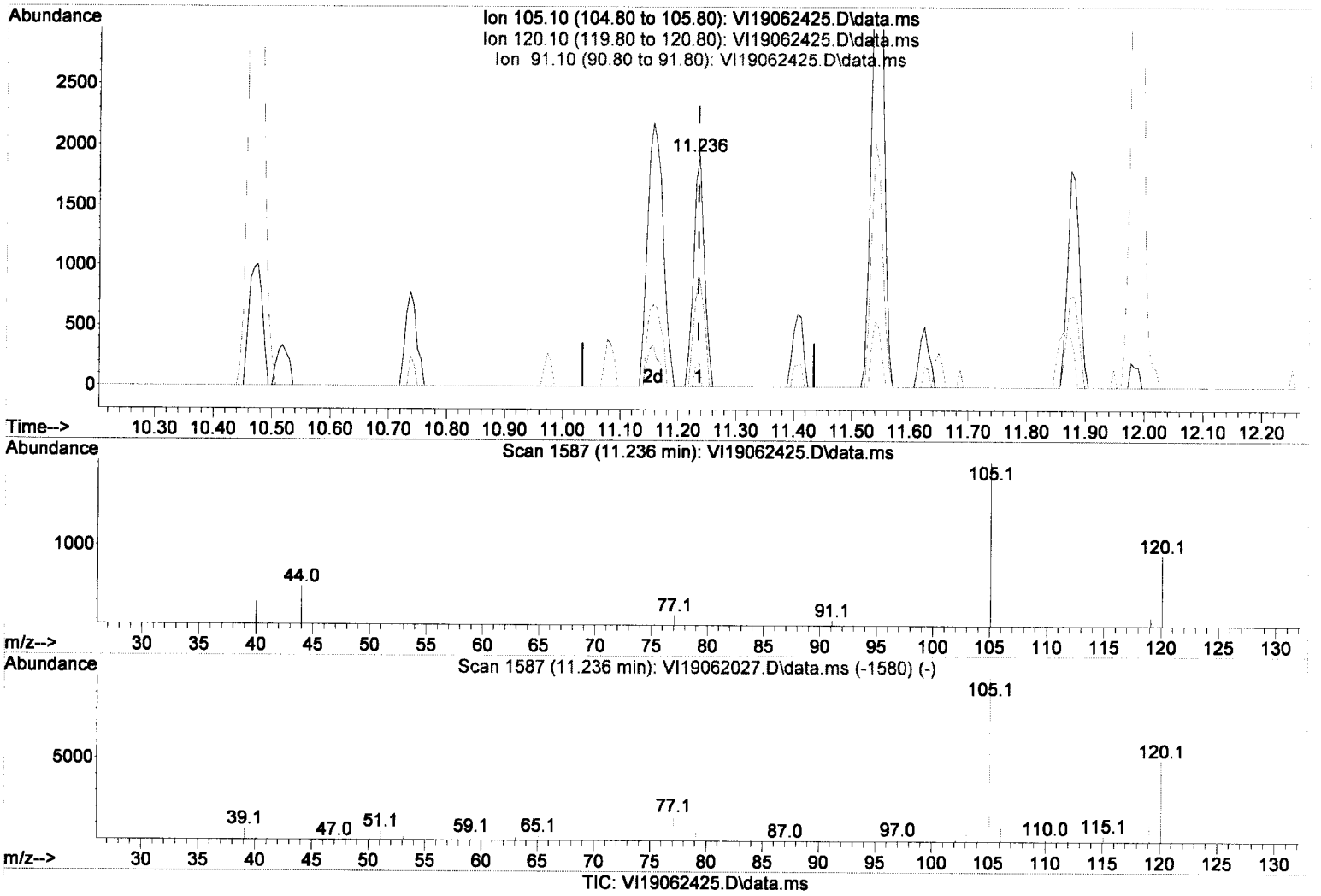
response 5807

Ion	Exp%	Act%
104.10	100.00	100.00
78.10	39.40	46.04
51.10	22.20	25.88
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062425.D
Acq On : 24 Jun 2019 7:22 pm
Operator : TNL
Sample : A9F0692-03RE1@10
Misc : 10X 5mL/50mL 8260C RR-01
ALS Vial : 25 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 25 07:31:55 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



TIC: VI19062425.D\data.ms

(72) 1,3,5-Trimethylbenzene

11.236min (+ 0.001) 0.51 ug/L

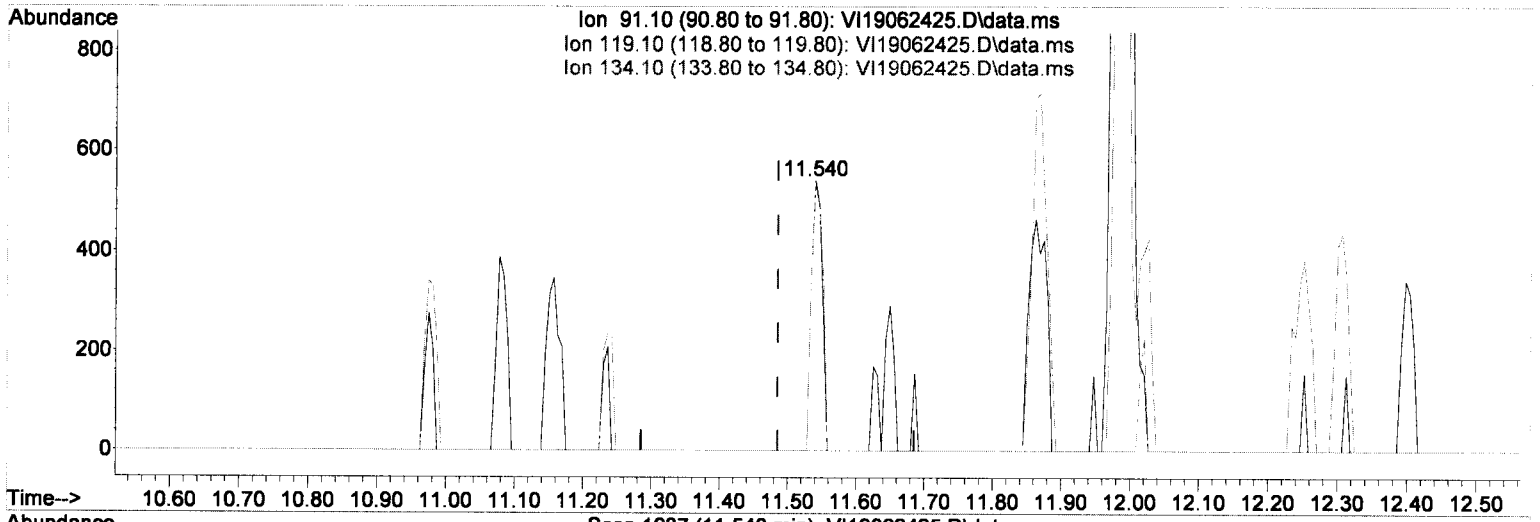
response 2490

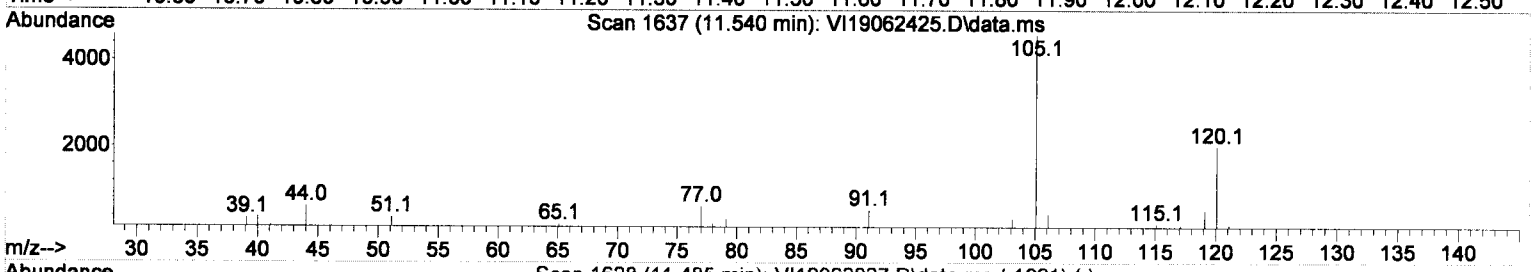
Ion	Exp%	Act%
105.10	100.00	100.00
120.10	49.90	47.34
91.10	10.40	10.82
0.00	0.00	0.00

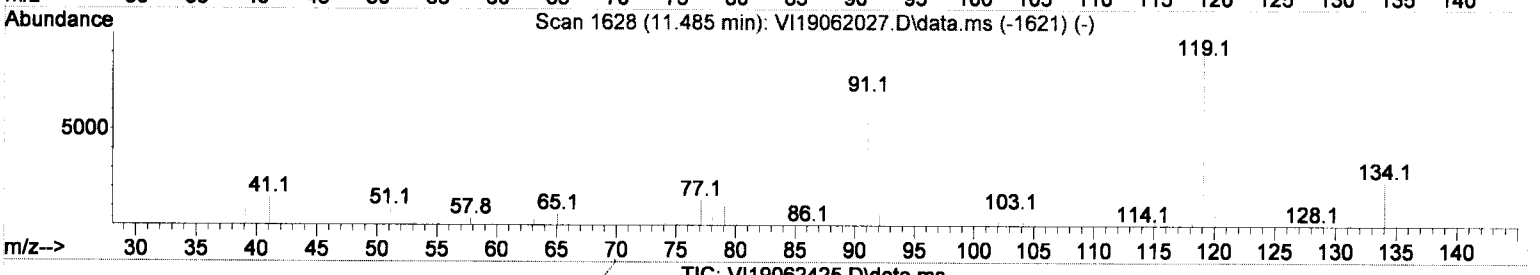
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062425.D
Acq On : 24 Jun 2019 7:22 pm
Operator : TNL
Sample : A9F0692-03RE1@10
Misc : 10X 5mL/50mL 8260C RR-01
ALS Vial : 25 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 25 07:31:55 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration







TIC: VI19062425.D\data.ms

(76) tert-Butylbenzene

11.540min (+ 0.055) 0.21 ug/L

response 596

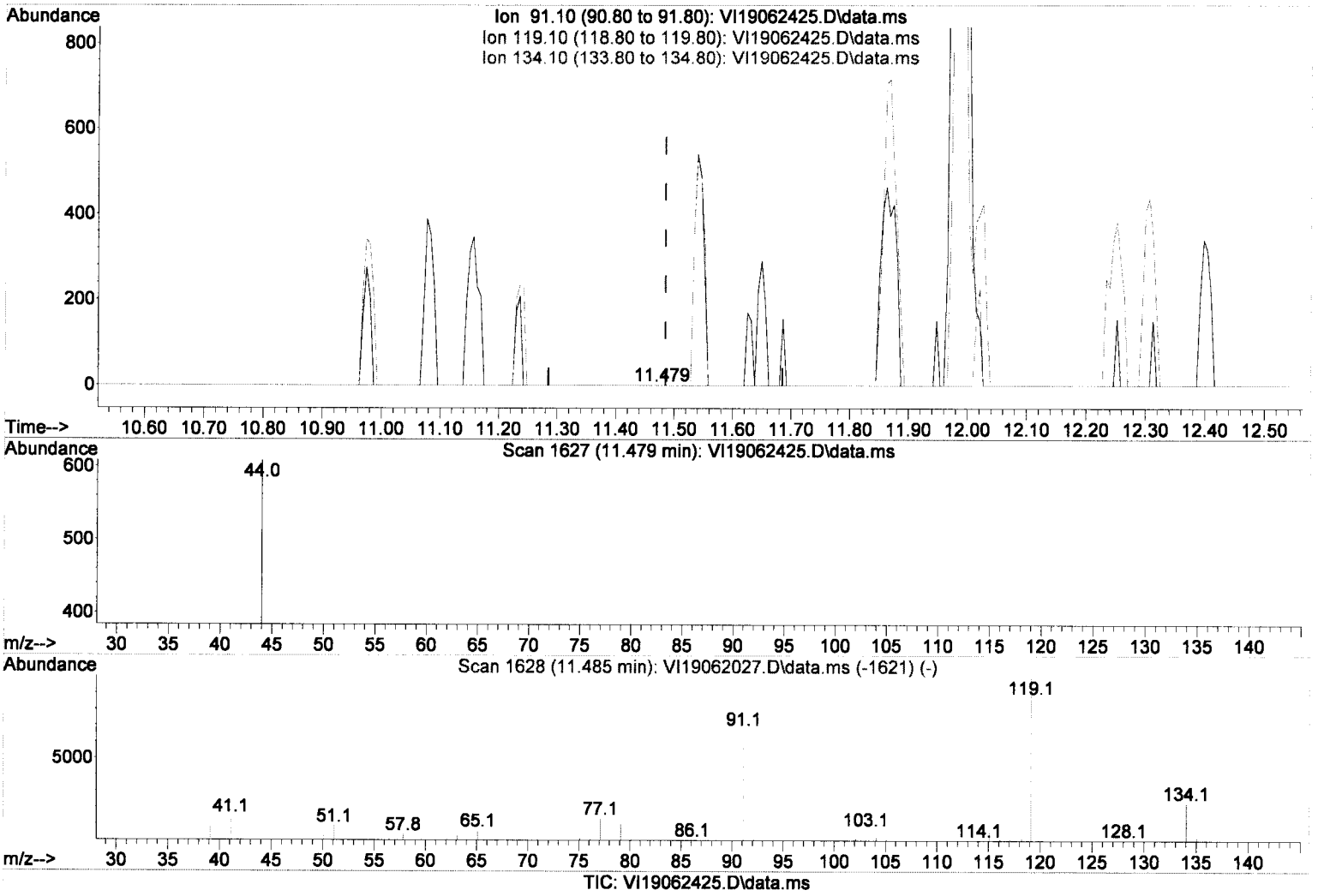
Ion	Exp%	Act%
91.10	100.00	100.00
119.10	156.60	99.26#
134.10	38.80	0.00#
0.00	0.00	0.00

MC 6/25/19 MC

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062425.D
Acq On : 24 Jun 2019 7:22 pm
Operator : TNL
Sample : A9F0692-03RE1@10
Misc : 10X 5mL/50mL 8260C RR-01
ALS Vial : 25 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 25 07:31:55 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



(76) tert-Butylbenzene

11.479min (-0.006) 0.00 ug/L m

response 0

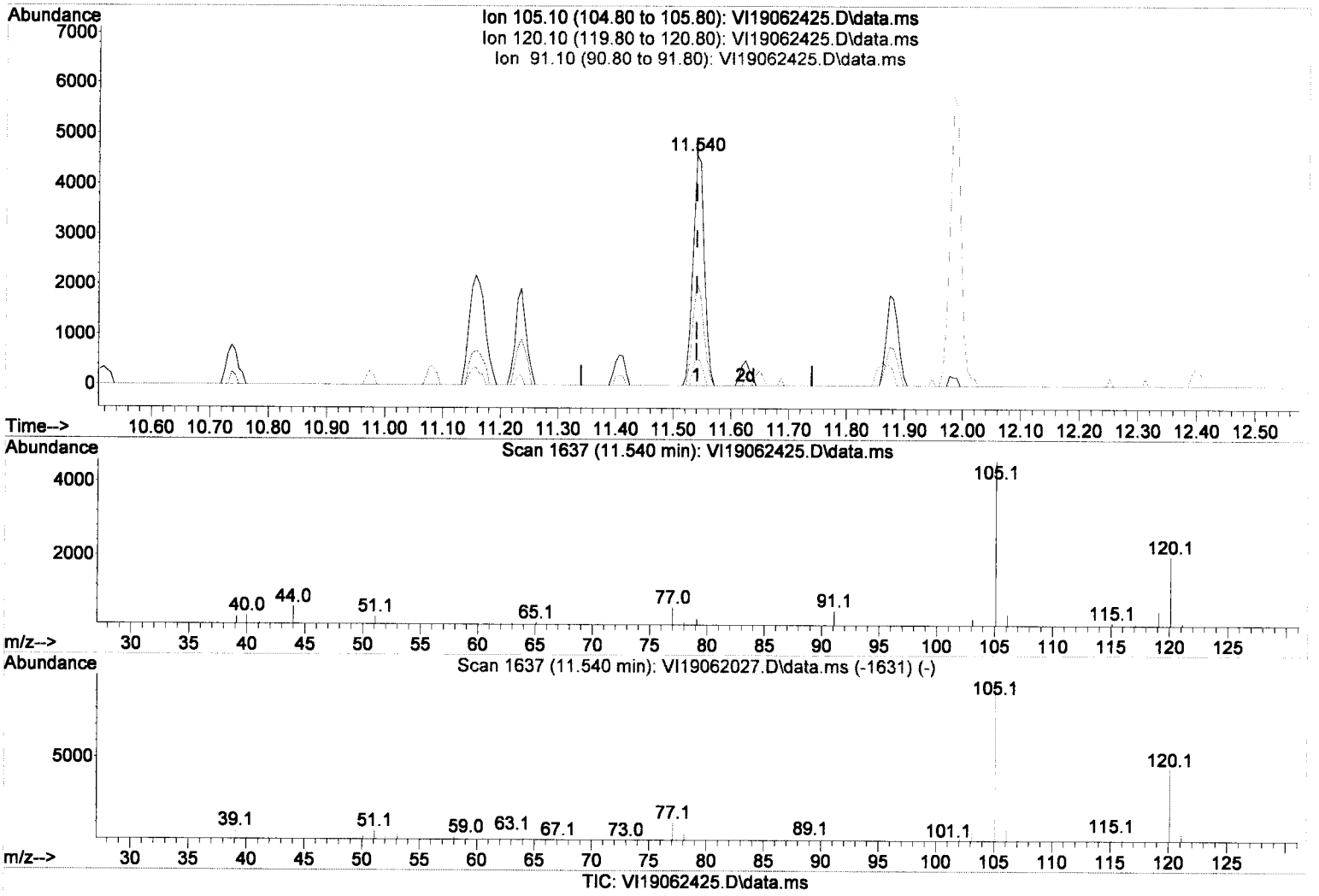
Ion	Exp%	Act%
91.10	100.00	0.00
119.10	156.60	0.00#
134.10	38.80	0.00#
0.00	0.00	0.00

ND 6/25/19 tnl

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062425.D
Acq On : 24 Jun 2019 7:22 pm
Operator : TNL
Sample : A9F0692-03RE1@10
Misc : 10X 5mL/50mL 8260C RR-01
ALS Vial : 25 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 25 07:31:55 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



TIC: VI19062425.D\data.ms

(77) 1,2,4-Trimethylbenzene

11.540min (-0.000) 1.27 ug/L

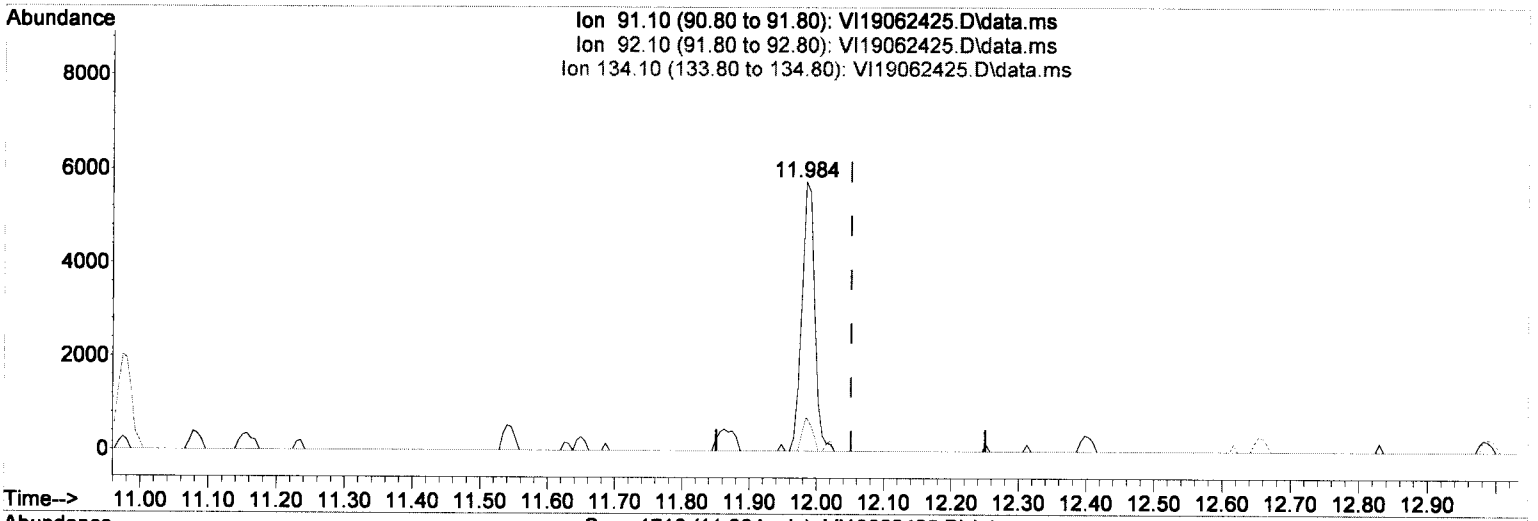
response 6184

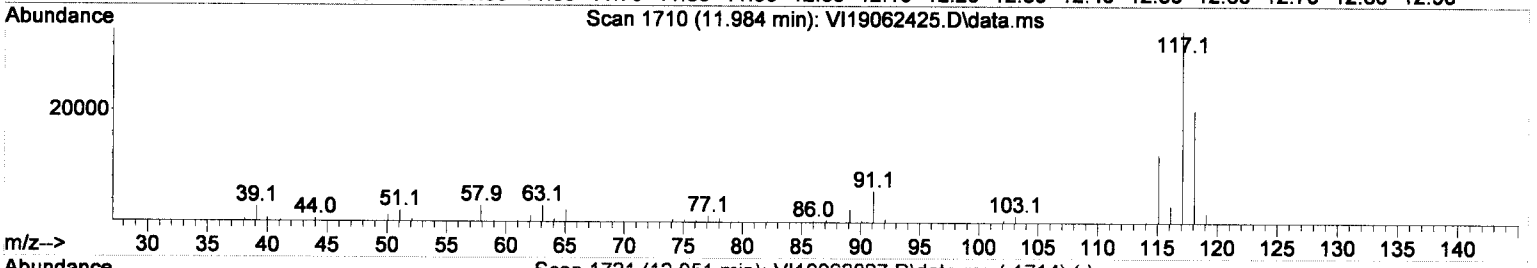
Ion	Exp%	Act%
105.10	100.00	100.00
120.10	49.80	43.99
91.10	10.50	11.78
0.00	0.00	0.00

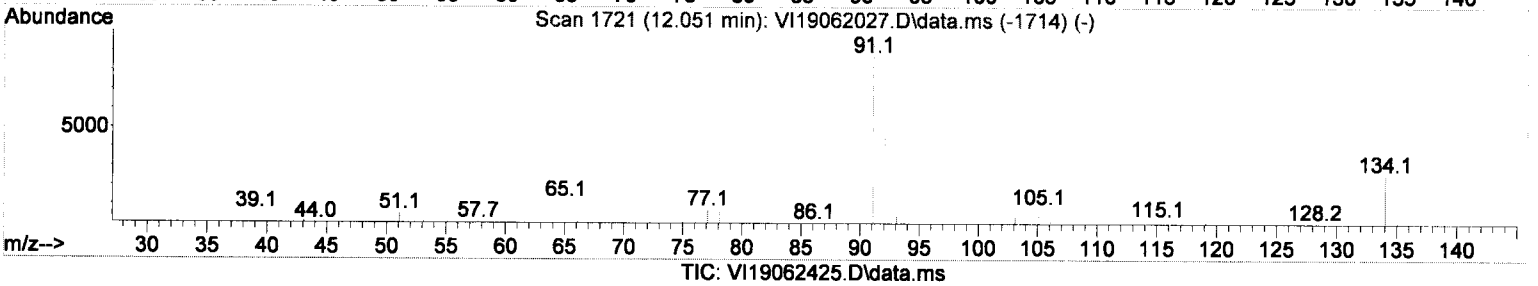
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062425.D
Acq On : 24 Jun 2019 7:22 pm
Operator : TNL
Sample : A9F0692-03RE1@10
Misc : 10X 5mL/50mL 8260C RR-01
ALS Vial : 25 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 25 07:31:55 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration







TIC: VI19062425.D\data.ms

(82) n-Butylbenzene

11.984min (-0.067) 1.76 ug/L

response 7692

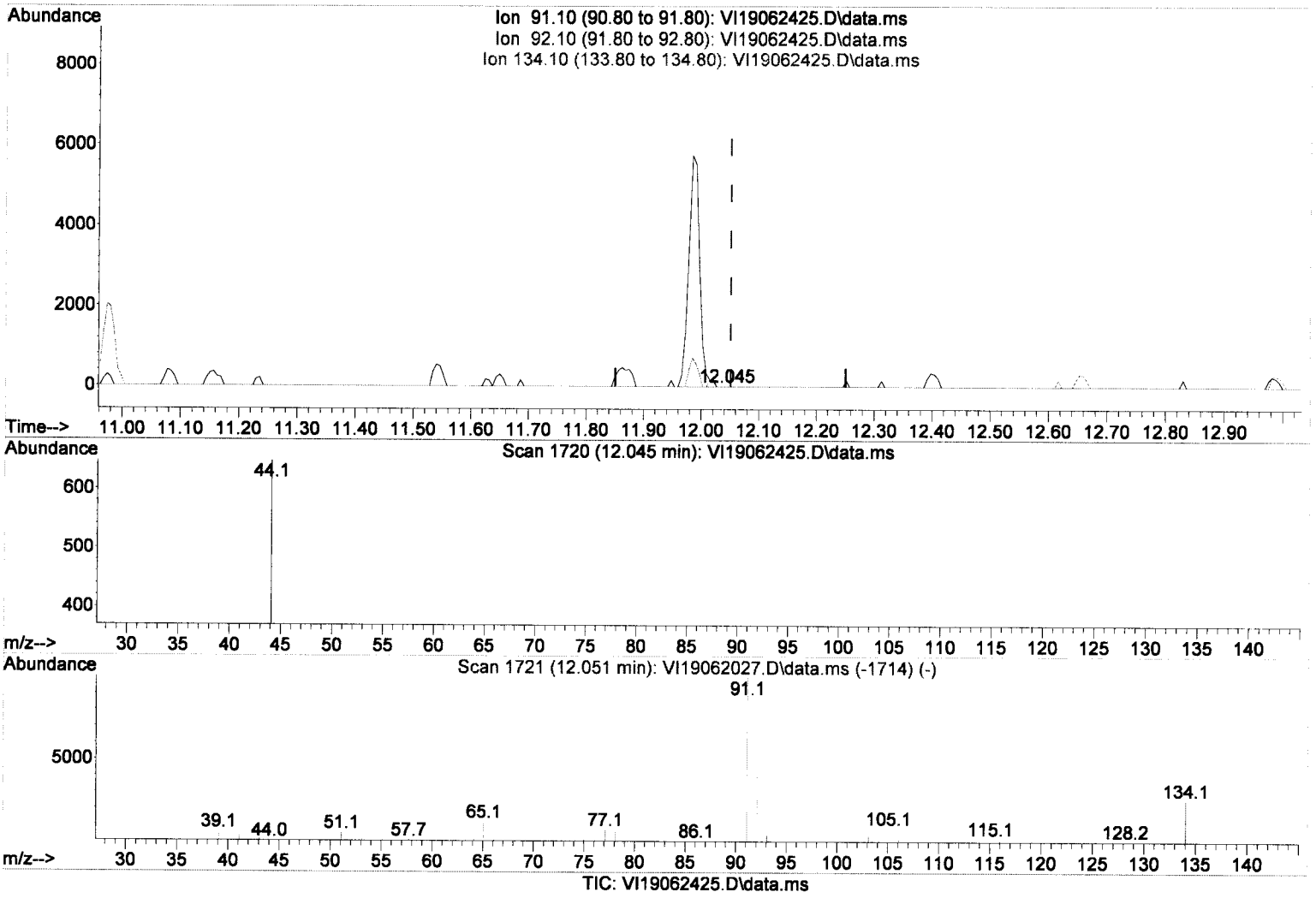
Ion	Exp%	Act%
91.10	100.00	100.00
92.10	55.90	12.43#
134.10	28.20	0.00
0.00	0.00	0.00

MC 6/25/2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062425.D
Acq On : 24 Jun 2019 7:22 pm
Operator : TNL
Sample : A9F0692-03RE1@10
Misc : 10X 5mL/50mL 8260C RR-01
ALS Vial : 25 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 25 07:31:55 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



TIC: VI19062425.D\data.ms

(82) n-Butylbenzene

12.045min (-0.006) 0.00 ug/L m

response 0

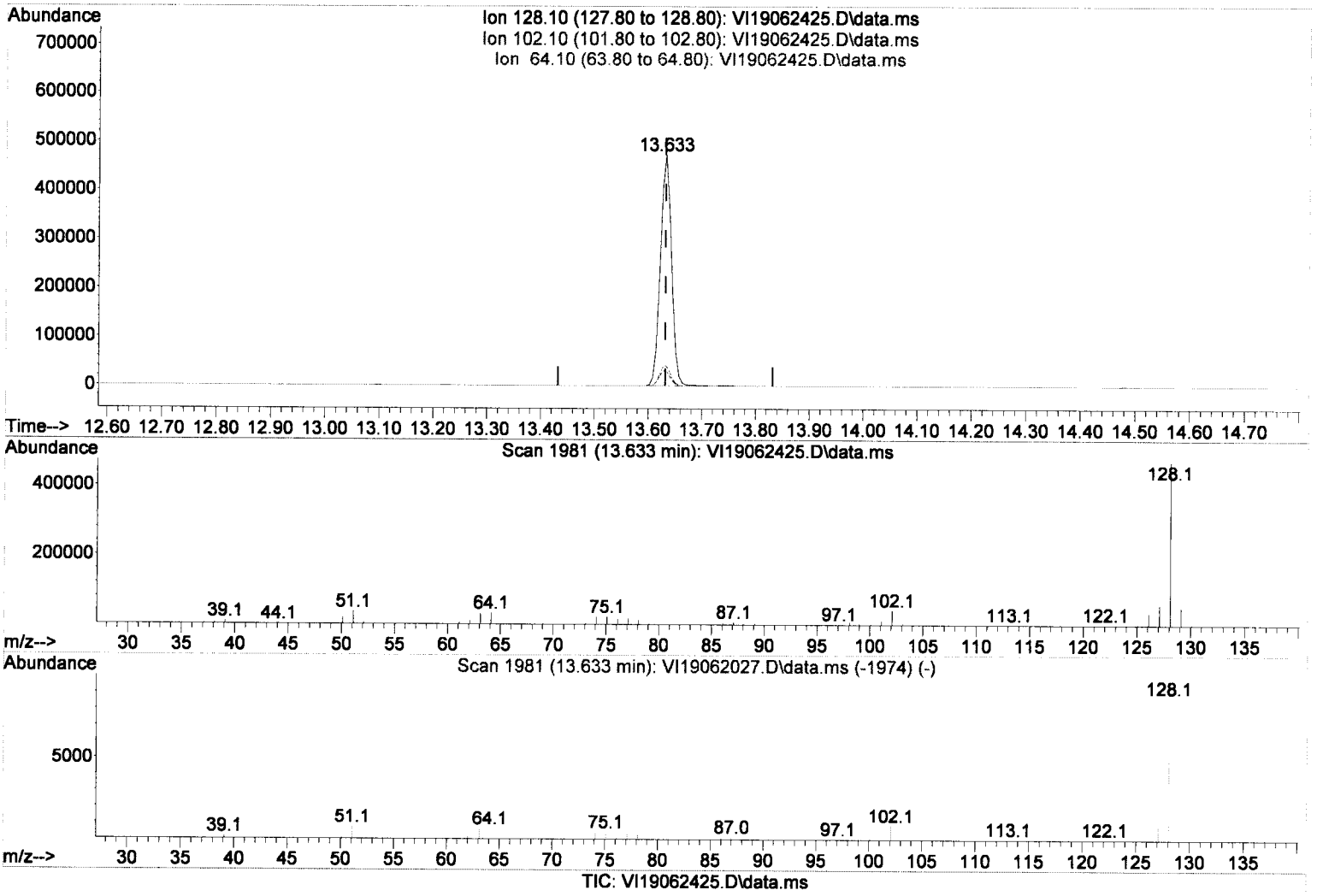
Ion	Exp%	Act%
91.10	100.00	0.00
92.10	55.90	0.00#
134.10	28.20	0.00
0.00	0.00	0.00

NP 6/25/19 mf

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062425.D
Acq On : 24 Jun 2019 7:22 pm
Operator : TNL
Sample : A9F0692-03RE1@10
Misc : 10X 5mL/50mL 8260C RR-01
ALS Vial : 25 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 25 07:31:55 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



(87) Naphthalene

13.633min (+ 0.001) 132.05 ug/L

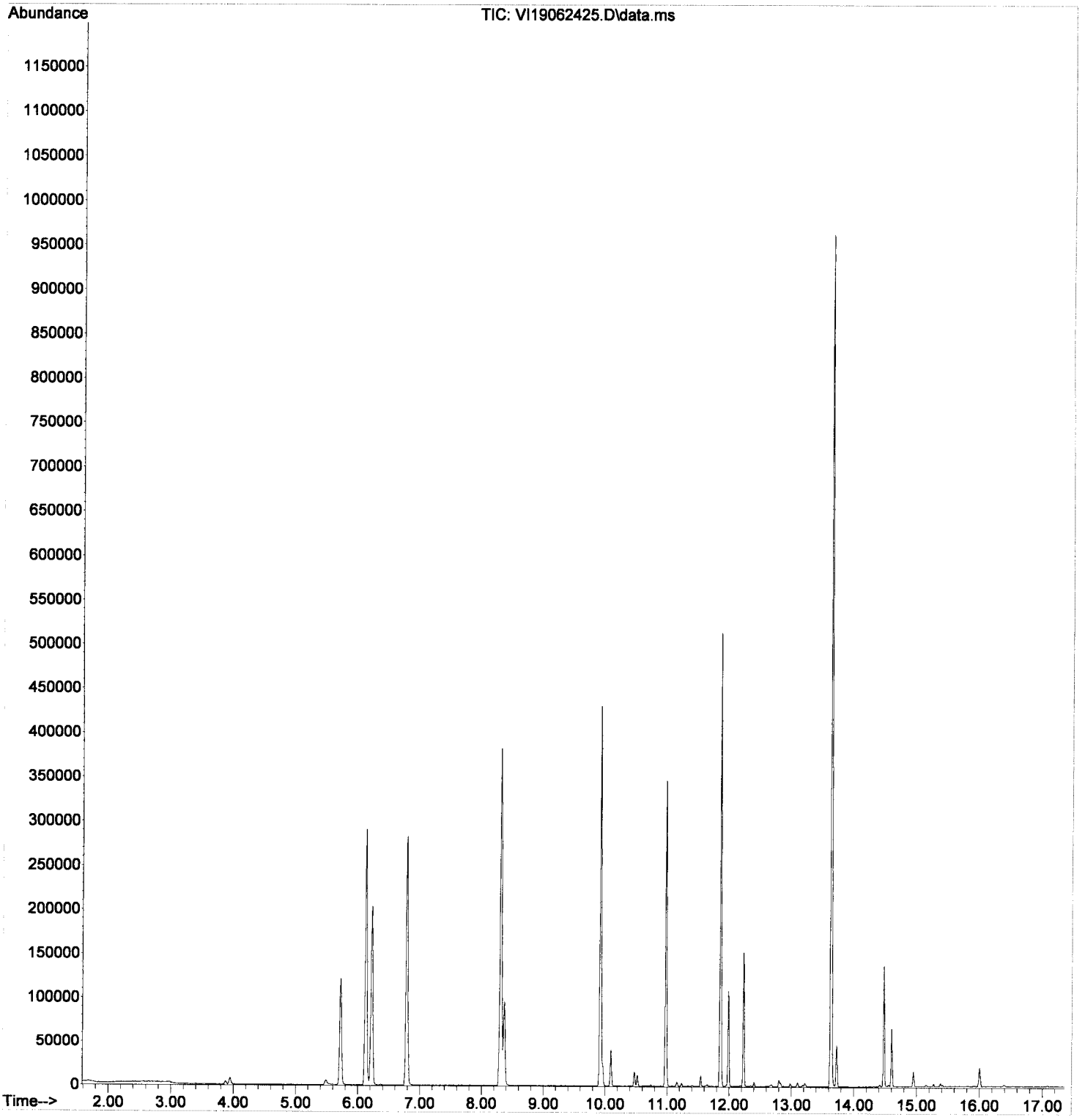
response 682143

Ion	Exp%	Act%
128.10	100.00	100.00
102.10	7.60	8.82
64.10	4.70	6.74
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062425.D
Acq On : 24 Jun 2019 7:22 pm
Operator : TNL
Sample : A9F0692-03RE1@10
Misc : 10X 5mL/50mL 8260C RR-01
ALS Vial : 25 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 25 07:31:55 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062428.D
Acq On : 24 Jun 2019 8:43 pm
Operator : TNL
Sample : 9061200-MS1
Misc : 1X 5mL A19F269 (A9F0709-12)
ALS Vial : 28 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 25 07:32:04 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.223	168	141092	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	9.916	117	218960	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	11.856	152	104485	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	5.724	111	80754	53.09	ug/L		0.00
39) 1,4-Difluorobenzene (S)	6.789	114	241233	51.37	ug/L		0.00
48) Toluene-d8 (S)	8.304	98	285166	49.85	ug/L		0.00
67) 4-Bromofluorobenzene (S)	10.980	174	84494	48.81	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.685	85	33694	23.03	ug/L		100
3) Chloromethane	1.904	50	38721	20.79	ug/L		97
4) Vinyl Chloride	2.007	62	40122	23.91	ug/L		96
5) Bromomethane	2.366	96	13946	16.10	ug/L		97
6) Chloroethane	2.506	64	17202	28.87	ug/L		77
7) Trichlorofluoromethane	2.670	101	51255	27.21	ug/L		97
8) Ethanol	3.242	45	50361	1458.58	ug/L		86
9) 1,1-Dichloroethene	3.242	61	48673	25.53	ug/L		97
10) Carbon Disulfide	3.260	76	79587	23.16	ug/L		99
11) Freon 113	3.297	101	29094	23.49	ug/L		99
12) Iodomethane	3.394	142	3777	7.72	ug/L		93
13) Acrolein	3.631	56	7835	20.40	ug/L		70
14) Methylene Chloride	3.881	84	31283	21.57	ug/L		97
15) Acetone	3.954	43	35993	52.39	ug/L		99
16) t-1,2-Dichloroethene	4.045	61	45274	24.31	ug/L		95
17) n-Hexane	4.130	86	5679	21.84	ug/L	#	52
18) Methyl-tert-butyl-ether	4.179	73	100474	22.04	ug/L		91
19) tert-Butanol (TBA)	4.301	59	448633	1462.05	ug/L		91
20) Diisopropyl ether (DIPE)	4.574	45	26974	5.67	ug/L		90
21) 1,1-Dichloroethane	4.690	63	60808	24.78	ug/L		95
22) Acrylonitrile	4.757	53	19211	24.62	ug/L		99
23) Ethyl-tert-butyl ether...	4.952	59	25075	5.44	ug/L		92
24) Vinyl Acetate	4.964	43	62830	20.23	ug/L		96
25) c-1,2-Dichloroethene	5.250	61	47976	24.14	ug/L		97
26) 2,2-Dichloropropane	5.359	77	39310	20.51	ug/L		97
27) Bromochloromethane	5.457	130	21842	23.84	ug/L		80
28) Chloroform	5.536	83	59936	23.66	ug/L		98
29) Carbon Tetrachloride	5.669	117	37528	24.22	ug/L		95
30) Tetrahydrofuran	5.706	42	18039	22.69	ug/L		87
31) 1,1,1-Trichloroethane	5.742	97	48454	23.99	ug/L		96
33) 1,1-Dichloropropene	5.870	75	45630	23.70	ug/L		98
34) 2-Butanone (MEK)	5.864	43	55508	48.51	ug/L		95
35) Benzene	6.132	78	134150	22.79	ug/L		98
36) tert-Amyl methyl ether...	6.253	73	23076	5.21	ug/L		99
37) 1,2-Dichloroethane (EDC)	6.345	62	48349	24.88	ug/L		95
38) iso-Butyl Alcohol	6.381	43	68192	584.00	ug/L		95
40) Trichloroethene (TCE)	6.752	130	32866	23.08	ug/L		93
41) Tert-Amyl-Ethyl-Ether ...	7.002	59	18242	5.36	ug/L		89
42) Dibromomethane	7.203	93	22345	23.86	ug/L		89
43) 1,2-Dichloropropane	7.318	63	35774	23.73	ug/L		94
44) Bromodichloromethane	7.385	83	42250	24.29	ug/L		94
47) c-1,3-Dichloropropene	8.097	75	46857	20.83	ug/L		95
49) Toluene	8.364	91	134978	21.61	ug/L		97

6/25/19 MS

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062428.D
Acq On : 24 Jun 2019 8:43 pm
Operator : TNL
Sample : 9061200-MS1
Misc : 1X 5mL A19F269 (A9F0709-12)
ALS Vial : 28 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 25 07:32:04 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration

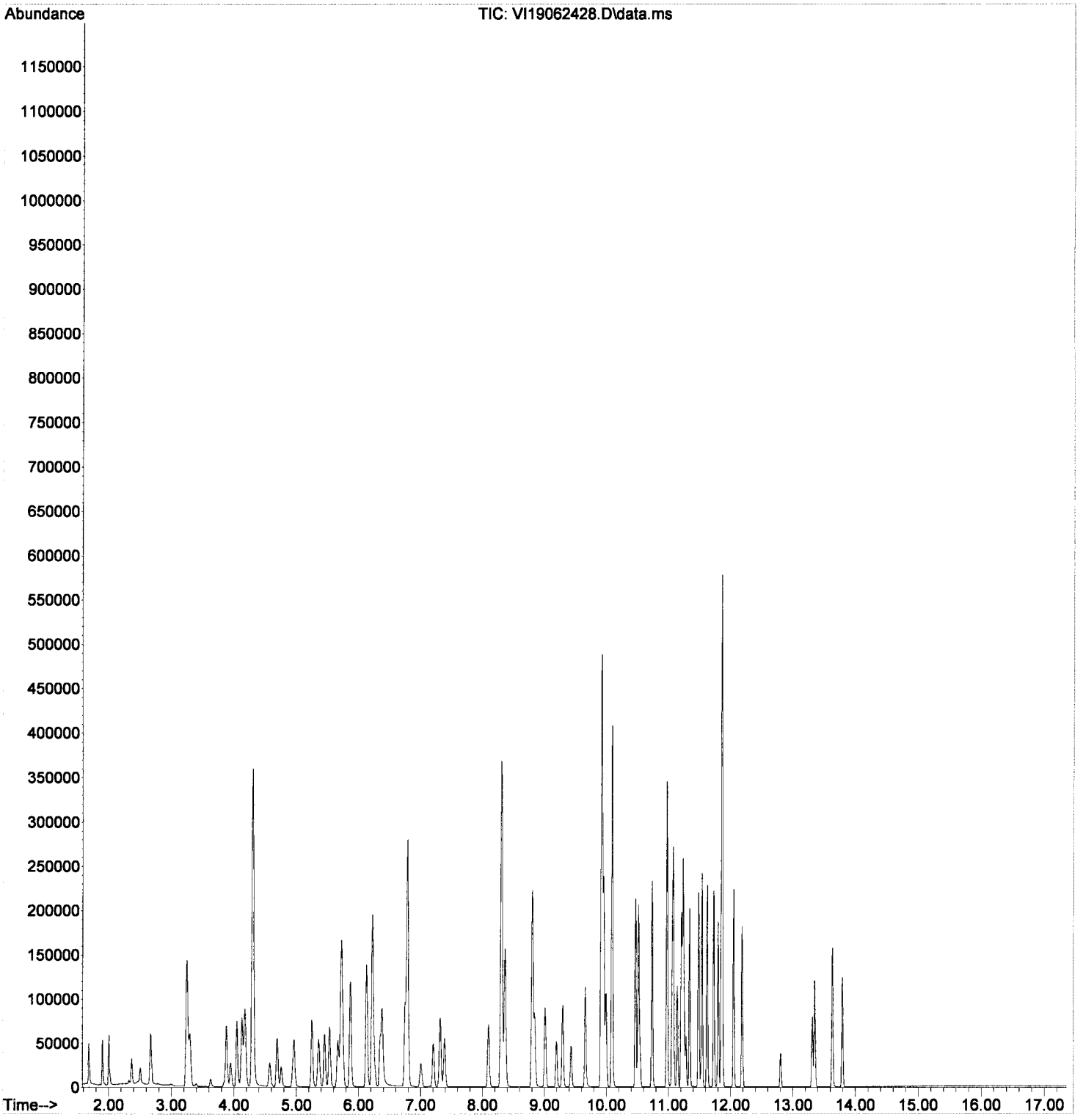
Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
50) Tetrachloroethene (PCE)	8.803	166	31409	22.14 ug/L		85
51) 4-Methyl-2-Pentanone (...	8.809	43	104315	47.64 ug/L		97
52) t-1,3-Dichloropropene	8.845	75	44280	21.50 ug/L		96
53) 1,1,2-Trichloroethane	9.009	97	31116	22.58 ug/L		98
54) Dibromochloromethane	9.192	129	29797	23.06 ug/L		99
55) 1,3-Dichloropropane	9.295	76	55417	22.57 ug/L		95
56) 1,2-Dibromoethane (EDB)	9.429	107	33172	22.86 ug/L		95
57) 2-Hexanone	9.660	43	75272	46.68 ug/L		97
58) Chlorobenzene	9.934	112	83658	22.03 ug/L		93
59) Ethylbenzene	9.958	91	147451	22.54 ug/L		99
60) 1,1,1,2-Tetrachloroethane	9.995	131	27204	23.46 ug/L		96
61) m,p-Xylenes (2)	10.092	91	220733	44.79 ug/L		96
62) o-Xylene	10.469	91	111998	22.30 ug/L		96
63) Styrene	10.518	104	85923	22.39 ug/L		92
64) Bromoform	10.542	173	19711	23.19 ug/L		95
65) Isopropylbenzene	10.737	105	133823	22.49 ug/L		98
68) Bromobenzene	11.066	156	35041	21.88 ug/L	#	84
69) n-Propylbenzene	11.078	91	161888	22.76 ug/L		96
70) 1,1,2,2-Tetrachloroethane	11.145	85	32284	24.06 ug/L		95
71) 2-Chlorotoluene	11.212	126	31441	21.89 ug/L		95
72) 1,3,5-Trimethylbenzene	11.236	105	107507	22.37 ug/L		98
73) 1,2,3-Trichloropropane	11.254	110	14555	23.63 ug/L		98
74) t-1,4-Dichloro-2-butene	11.285	53	10800	20.77 ug/L	#	71
75) 4-Chlorotoluene	11.339	91	99940	22.44 ug/L		92
76) tert-Butylbenzene	11.485	91	62848	22.69 ug/L		88
77) 1,2,4-Trimethylbenzene	11.540	105	110222	22.87 ug/L		93
78) sec-Butylbenzene	11.625	105	134610	22.58 ug/L		98
79) 4-Isopropyltoluene	11.729	119	107880	22.93 ug/L		97
80) 1,3-Dichlorobenzene	11.802	146	62211	22.20 ug/L		96
81) 1,4-Dichlorobenzene	11.869	146	63096	21.81 ug/L		95
82) n-Butylbenzene	12.051	91	101943	23.62 ug/L		96
83) 1,2-Dichlorobenzene	12.185	146	59992	22.10 ug/L		97
84) 1,2-Dibromo-3-Chloropr...	12.806	157	9208	21.73 ug/L		74
85) Hexachlorobutadiene	13.310	223	8448	21.59 ug/L		94
86) 1,2,4-Trichlorobenzene	13.353	180	35041	22.44 ug/L		97
87) Naphthalene	13.633	128	112320	21.99 ug/L		96
88) 1,2,3-Trichlorobenzene	13.791	180	34042	22.46 ug/L		94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062428.D
Acq On : 24 Jun 2019 8:43 pm
Operator : TNL
Sample : 9061200-MS1
Misc : 1X 5mL A19F269 (A9F0709-12)
ALS Vial : 28 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 25 07:32:04 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062431.D
Acq On : 24 Jun 2019 10:04 pm
Operator : TNL
Sample : 9F24026-IBL5
Misc : 1X 5mL DI
ALS Vial : 31 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 25 07:32:13 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.223	168	138166	50.00	ug/L	0.00
45) Chlorobenzene-d5 (I)	9.916	117	214575	50.00	ug/L	0.00
66) 1,4-Dichlorobenzene-d4...	11.856	152	94511	50.00	ug/L	0.00
System Monitoring Compounds						
32) Dibromofluoromethane (S)	5.718	111	81324	54.60	ug/L	0.00
39) 1,4-Difluorobenzene (S)	6.789	114	240739	52.35	ug/L	0.00
48) Toluene-d8 (S)	8.304	98	284411	50.73	ug/L	0.00
67) 4-Bromofluorobenzene (S)	10.980	174	79179	50.57	ug/L	0.00
Target Compounds						Qvalue
3) Chloromethane	1.898	50	148	0.08	ug/L #	47
6) Chloroethane	2.536	64	242	0.41	ug/L #	36
14) Methylene Chloride	3.881	84	5987	2.61	ug/L	97
15) Acetone	3.948	43	27162	40.37	ug/L	98
19) tert-Butanol (TBA)	4.301	59	216	0.72	ug/L	46
34) 2-Butanone (MEK)	5.870	43	132	0.12	ug/L	52

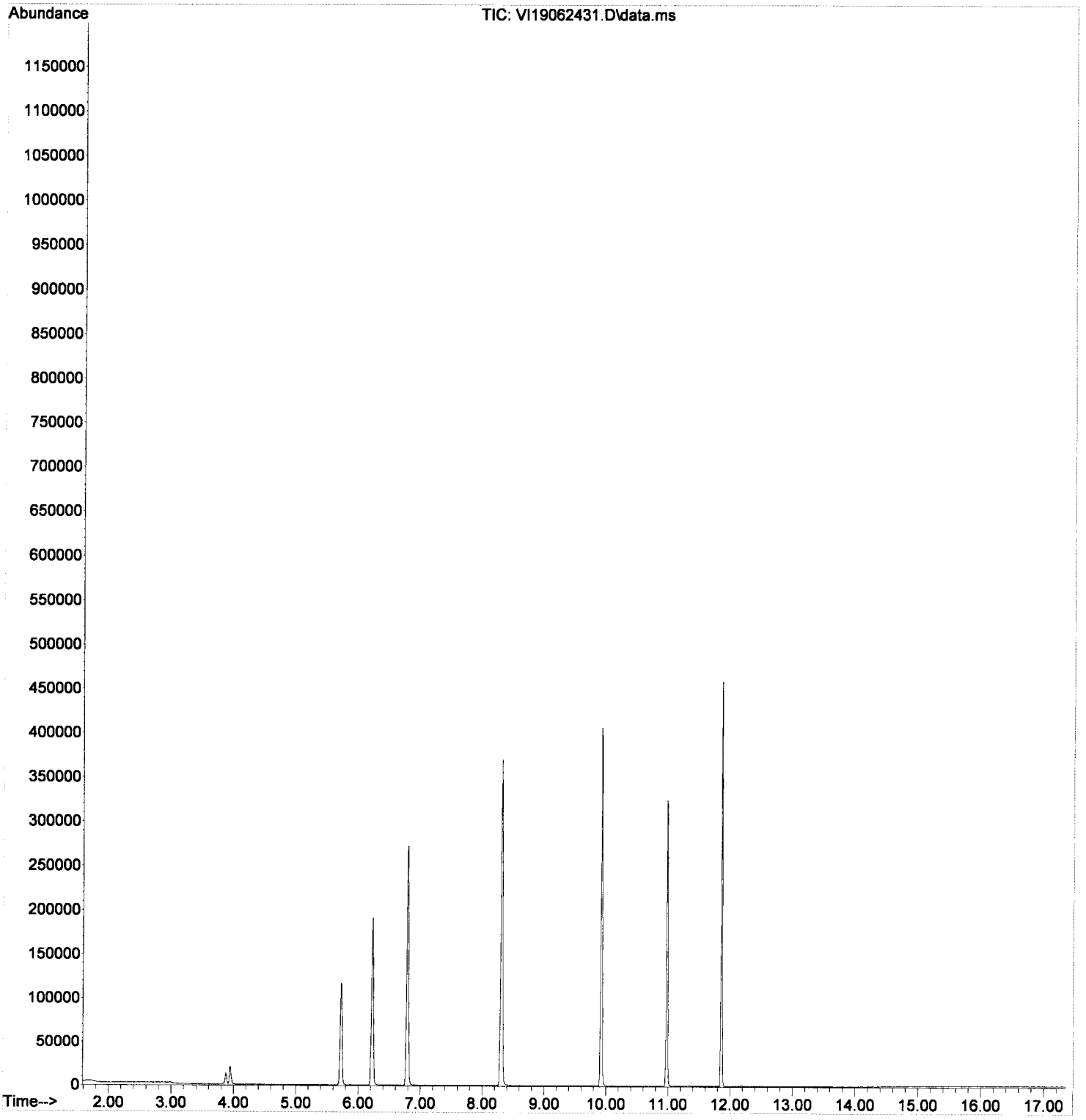
(#) = qualifier out of range (m) = manual integration (+) = signals summed

NK 6/25/19

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062431.D
Acq On : 24 Jun 2019 10:04 pm
Operator : TNL
Sample : 9F24026-IBL5
Misc : 1X 5mL DI
ALS Vial : 31 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 25 07:32:13 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



Volatile Organic Compounds by EPA 8260C
Benchsheet & Analysis Sequence Data

Batch 9061200

Sequence 9F18058 (A9F0692-01,02,03RE1)

PREPARATION BENCH SHEET

BATCH #: 9061200 (Water)

Apex Laboratories

Prep Method: EPA 5030B

Lab Number	Cont.	Analysis	Prepared	Initial (mL)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surr.	ClientID / Sample	Extraction Comments	pH*
9061200-BLK1		QC	06/24/19 08:27	5	5							
9061200-BS1		QC	06/24/19 08:27	5	5	A19F269		5				
9061200-BS2		QC	06/24/19 08:27	5	5	A19F151		5				
A9F0642-07RE1	B	8260C Halogenated VOCs	06/24/19 10:27	5	5					MW-4-061919	1X RR-01	<2
A9F0663-01RE1	B	624 Volatiles	06/24/19 10:27	5	5					Wastewater	1X RR-01 BTEX ONLY	<2
A9F0692-01	A	8260C Full List	06/24/19 10:27	5	5					2708-190620-MULT802-TB		<2
A9F0692-02	A	8260C Full List	06/24/19 10:27	5	5					2708-190620-MULT802-107		<2
A9F0692-02RE1	B	8260C Full List	06/24/19 10:27	5	5					2708-190620-MULT802-107	10X RR-01 unmatched	<2
A9F0692-03	A	8260C Full List	06/24/19 10:27	5	5					2708-190620-MULT802-108		<2
A9F0692-03RE1	A	8260C Full List	06/24/19 10:27	5	5					2708-190620-MULT802-108	1X RR-01 tnl Added 6/25/2019 by tnl	<2
A9F0705-01	A	8260C RBDM List	06/24/19 10:27	5	5					HC08-W		<2
A9F0705-01	A	NWTPH-Gx	06/24/19 10:27	5	5					HC08-W		<2
A9F0705-02	A	NWTPH-Gx	06/24/19 10:27	5	5					HC09-W		<2
A9F0705-02	A	8260C RBDM List	06/24/19 10:27	5	5					HC09-W		<2
A9F0705-02RE1	B	NWTPH-Gx	06/24/19 10:27	5	5					HC09-W	1X RR-01	<2
A9F0705-02RE1	B	8260C RBDM List	06/24/19 10:27	5	5					HC09-W	1X RR-01	<2
A9F0705-03	A	NWTPH-Gx	06/24/19 10:27	5	5					HC10-W		<2
A9F0705-03	A	8260C RBDM List	06/24/19 10:27	5	5					HC10-W		<2
A9F0705-04	A	NWTPH-Gx	06/24/19 10:27	5	5					HC11-W		<2
A9F0705-04	A	8260C RBDM List	06/24/19 10:27	5	5					HC11-W		<2
A9F0709-01	A	NWTPH-Gx	06/24/19 10:27	5	5					MW-62	Added for BatchQC in: 9061200	<2
A9F0709-01	A	8260C RBDM List	06/24/19 10:27	5	5					MW-62	Added for BatchQC in: 9061200	<2

Prepared By: 6/25/19 tnl Date

Reviewed By: 6/25/19 Date

PREPARATION BENCH SHEET

BATCH #: 9061200 (Water)

Apex Laboratories

Prep Method: EPA 5030B

Lab Number	Cont.	Analysis	Prepared	Initial (mL)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surr.	ClientID / Sample	Extraction Comments	pH*
A9F0709-01	A	624 Volatiles	06/24/19 10:27	5	5					MW-62	Added for BatchQC in: 9061200	<2
A9F0709-01	A	8260C Full List	06/24/19 10:27	5	5					MW-62		<2
A9F0709-01	A	8260C Halogenated VOCs	06/24/19 10:27	5	5					MW-62	Added for BatchQC in: 9061200	<2
9061200-DUP1		QC	06/24/19 10:27	5	5		A9F0709-01					<2
A9F0709-02	A	8260C Full List	06/24/19 10:27	5	5					MW-52		<2
A9F0709-03	A	8260C Full List	06/24/19 10:27	5	5					MW-52 DUP		<2
A9F0709-04	A	8260C Full List	06/24/19 10:27	5	5					MW-49		<2
A9F0709-05	A	8260C Full List	06/24/19 10:27	5	5					MW-71		<2
A9F0709-06	A	8260C Full List	06/24/19 10:27	5	5					MW-21		<2
A9F0709-07	A	8260C Full List	06/24/19 10:27	5	5					MW-39		<2
A9F0709-08	A	8260C Full List	06/24/19 10:27	5	5					MW-27		<2
A9F0709-12	A	NWTPH-Gx	06/24/19 10:27	5	5					MW-43	Added for BatchQC in: 9061200	<2
A9F0709-12	A	8260C RBDM List	06/24/19 10:27	5	5					MW-43	Added for BatchQC in: 9061200	<2
A9F0709-12	A	624 Volatiles	06/24/19 10:27	5	5					MW-43	Added for BatchQC in: 9061200	<2
A9F0709-12	A	8260C Full List	06/24/19 10:27	5	5					MW-43		<2
A9F0709-12	A	8260C Halogenated VOCs	06/24/19 10:27	5	5					MW-43	Added for BatchQC in: 9061200	<2
9061200-MS1		QC	06/24/19 10:27	5	5	A19F269	A9F0709-12	5				<2

*pH <2 verified 6/25/19 hm

Standards/Reagents

Reagent(s)

Std ID	Exp. Date	Description

Analyte Spike(s)

Std ID	Exp. Date	Description
A19F151	12/10/19	Prim NWTPH-Gx Spike (500 ug/mL)
A19F269	07/14/19	8260 Cal. Std. B VOCR+OXY Spike (20-40ug/r

Surrogate(s)

Std ID	Exp. Date	Description

Prepared By: Date

Reviewed By: Date

PREPARATION BENCH SHEET

BATCH #: 9061200 (Water)

Apex Laboratories

Prep Method: EPA 5030B

Lab Number	Cont.	Analysis	Prepared	Initial (mL)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surr.	ClientID / Sample	Extraction Comments	pH*
GCMS9												

Prepared By: Date

Reviewed By: Date

ELEMENT SEQUENCE LOG

Apex Laboratories

Sequence:	9F24026	Instrument:	VOA-GCMS9
Date:	06/24/19 08:11	Calibration:	A9F2102

#	Lab Number	Matrix	Analysis	Client	Due	Batch	ISTD ID	STD ID
1	9F24026-IBL1	Water	QC	QC			A19C125	
2	9F24026-TUN1	Water	QC	QC			A19C125	
3	9F24026-CCV1	Water	QC	QC			A19C125	
4	9061200-BS1	Water	QC	QC		9061200	A19C125	
5	9F24026-CCV2	Water	QC	QC			A19C125	
6	9061200-BS2	Water	QC	QC		9061200	A19C125	
7	9061200-BLK1	Water	QC	QC		9061200	A19C125	
8	A9F0692-01	Water	8260C Full List	Hahn and Associates	07/05/19	9061200	A19C125	
9	A9F0692-02	Water	8260C Full List	Hahn and Associates	06/25/19	9061200	A19C125	
10	A9F0692-03	Water	8260C Full List	Hahn and Associates	06/25/19	9061200	A19C125	
11	A9F0705-02	Water	8260C RBDM List		06/25/19	9061200	A19C125	
"	"	Water	NWTPH-Gx		06/25/19	9061200	A19C125	
12	A9F0705-01	Water	8260C RBDM List		06/25/19	9061200	A19C125	
"	"	Water	NWTPH-Gx		06/25/19	9061200	A19C125	
13	A9F0705-03	Water	8260C RBDM List		06/25/19	9061200	A19C125	
"	"	Water	NWTPH-Gx		06/25/19	9061200	A19C125	
14	A9F0705-04	Water	8260C RBDM List		06/25/19	9061200	A19C125	
"	"	Water	NWTPH-Gx		06/25/19	9061200	A19C125	
15	A9F0663-01RE1	Water	624 Volatiles		06/27/19	9061200	A19C125	
16	9F24026-IBL2	Water	QC	QC			A19C125	
17	A9F0709-01	Water	8260C Full List		07/05/19	9061200	A19C125	
"	"	Water	624 Volatiles	(QC Source)		9061200	A19C125	
"	"	Water	8260C Halogenated VOCs	(QC Source)		9061200	A19C125	
"	"	Water	8260C RBDM List	(QC Source)		9061200	A19C125	
"	"	Water	NWTPH-Gx	(QC Source)		9061200	A19C125	
18	9061200-DUP1	Water	QC	QC		9061200	A19C125	
19	A9F0709-02	Water	8260C Full List		07/05/19	9061200	A19C125	
20	A9F0709-03	Water	8260C Full List		07/05/19	9061200	A19C125	
21	A9F0709-04	Water	8260C Full List		07/05/19	9061200	A19C125	
22	A9F0709-05	Water	8260C Full List		07/05/19	9061200	A19C125	
23	A9F0709-06	Water	8260C Full List		07/05/19	9061200	A19C125	
24	A9F0709-07	Water	8260C Full List		07/05/19	9061200	A19C125	
25	A9F0709-08	Water	8260C Full List		07/05/19	9061200	A19C125	
26	A9F0705-02RE1	Water	8260C RBDM List		06/25/19	9061200	A19C125	
"	"	Water	NWTPH-Gx		06/25/19	9061200	A19C125	
27	A9F0692-03RE1	Water	8260C Full List	Hahn and Associates	06/25/19	9061200	A19C125	
28	A9F0642-07RE1	Water	8260C Halogenated VOCs		07/02/19	9061200	A19C125	
29	A9F0709-12	Water	8260C Full List		07/05/19	9061200	A19C125	
"	"	Water	624 Volatiles	(QC Source)		9061200	A19C125	
"	"	Water	8260C Halogenated VOCs	(QC Source)		9061200	A19C125	
"	"	Water	8260C RBDM List	(QC Source)		9061200	A19C125	
"	"	Water	NWTPH-Gx	(QC Source)		9061200	A19C125	
30	9061200-MS1	Water	QC	QC		9061200	A19C125	
31	9F24026-IBL3	Water	QC	QC			A19C125	
32	9F24026-IBL4	Water	QC	QC			A19C125	
33	9F24026-IBL5	Water	QC	QC			A19C125	

Sequence:	9F24026	Instrument:	VOA-GCMS9
Date:	06/24/19 08:11	Calibration:	A9F2102

#	Lab Number	Matrix	Analysis	Client	Due	Batch	ISTD ID	STD ID

Data Entered By: 6/25/19 [illegible]

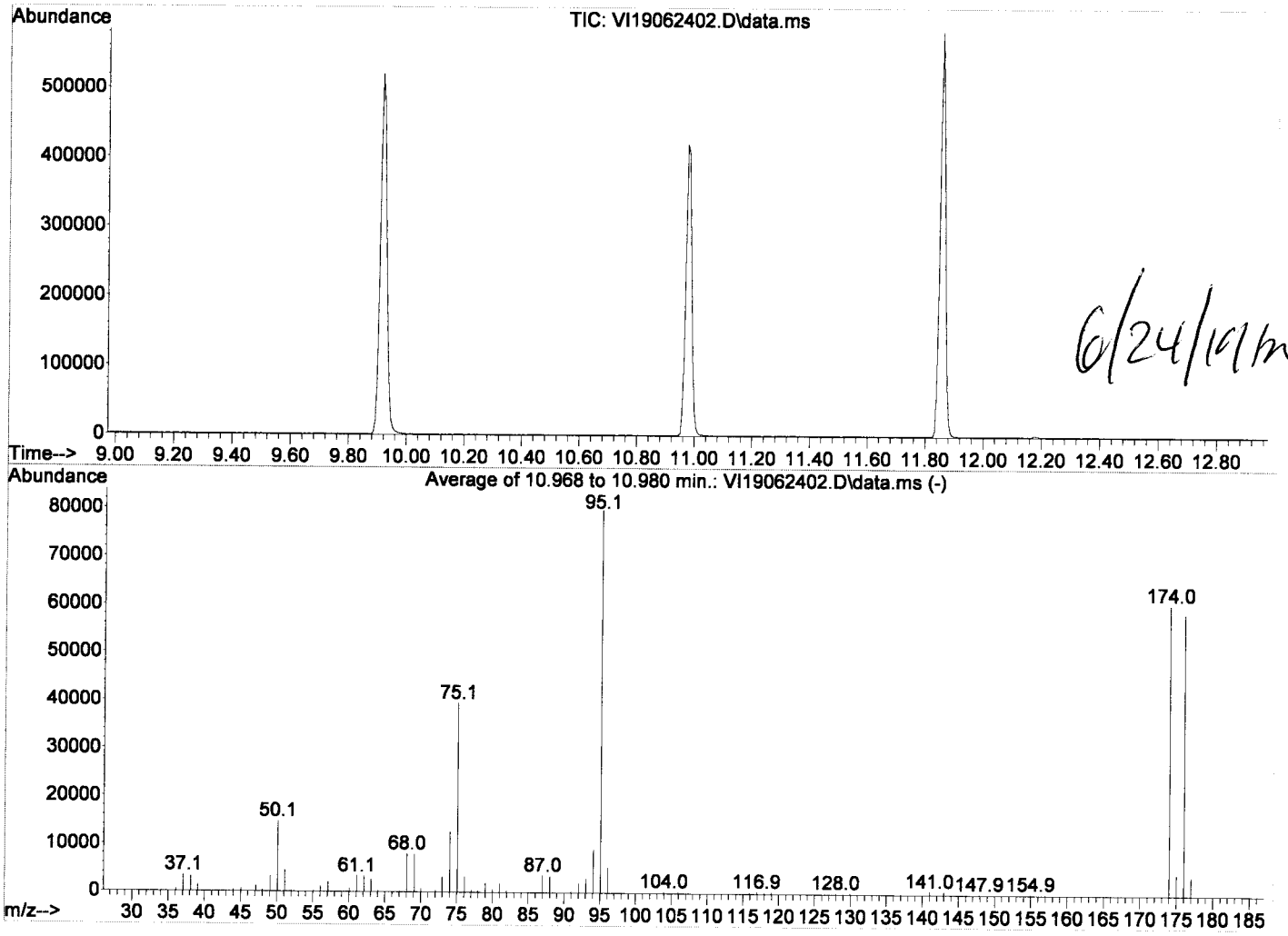
Data Reviewed By: [illegible] 10/25/19

Comments: A9F0663-01BKF 624 → BTEX only

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062402.D
Acq On : 24 Jun 2019 9:00 am
Operator : TNL
Sample : 9F24026-TUN1
Misc : A19C125 5mL BFB IS/SURR
ALS Vial : 2 Sample Multiplier: 1

Integration File: RTEINT.P

Method : C:\msdchem\1\methods\VI190621W+.M
Title : EPA 8260: Volatile Organic Compounds
Last Update : Fri Jun 21 10:05:40 2019



6/24/19 MJ

AutoFind: Scans 1543, 1544, 1545; Background Corrected with Scan 1537

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	12	40	18.5	14770	PASS
75	95	30	60	49.5	39512	PASS
95	95	100	100	100.0	79875	PASS
96	95	5	9	6.7	5368	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	200	75.9	60627	PASS
175	174	5	9	7.3	4422	PASS
176	174	95	101	97.0	58800	PASS
177	176	5	9	6.7	3930	PASS

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062402.D
Acq On : 24 Jun 2019 9:00 am
Operator : TNL
Sample : 9F24026-TUN1
Misc : A19C125 5mL BFB IS/SURR
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 10:19:13 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.223	168	186211	50.00	ug/L	0.00
45) Chlorobenzene-d5 (I)	9.916	117	274758	50.00	ug/L	0.00
66) 1,4-Dichlorobenzene-d4...	11.856	152	123418	50.00	ug/L	0.00
System Monitoring Compounds						
32) Dibromofluoromethane (S)	5.724	111	102127	50.88	ug/L	0.00
39) 1,4-Difluorobenzene (S)	6.789	114	313000	50.50	ug/L	0.00
48) Toluene-d8 (S)	8.304	98	365982	50.98	ug/L	0.00
67) 4-Bromofluorobenzene (S)	10.980	174	103580	50.66	ug/L	0.00
Target Compounds						Qvalue
3) Chloromethane	1.904	50	392	0.16	ug/L #	47
5) Bromomethane	2.372	96	211	0.18	ug/L #	37
6) Chloroethane	2.506	64	398	0.51	ug/L #	36
14) Methylene Chloride	3.881	84	6837	1.90	ug/L	99
15) Acetone	3.954	43	2736	3.02	ug/L	99
19) tert-Butanol (TBA)	4.307	59	138	0.34	ug/L	46

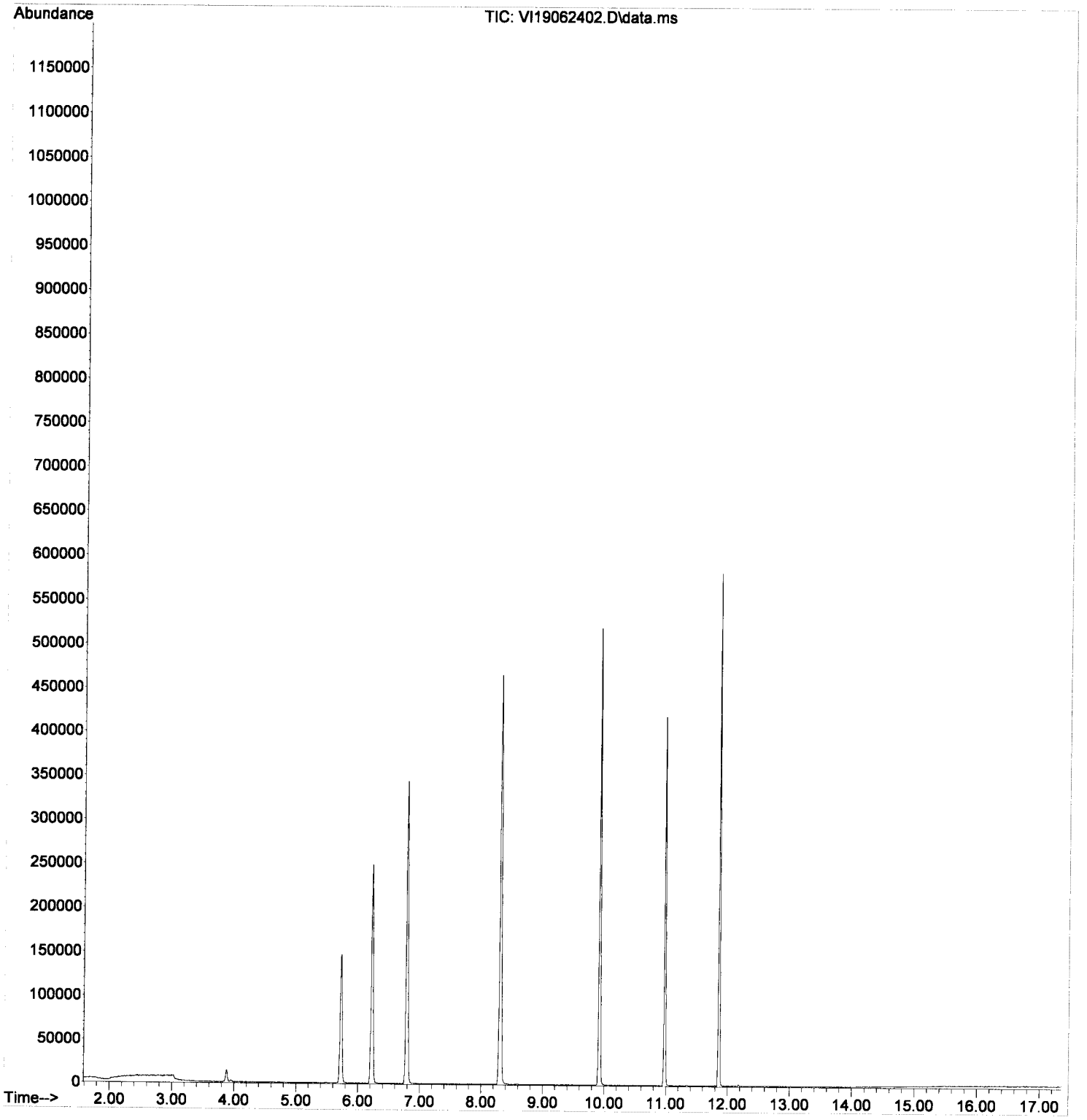
6/24/2019

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062402.D
Acq On : 24 Jun 2019 9:00 am
Operator : TNL
Sample : 9F24026-TUN1
Misc : A19C125 5mL BFB IS/SURR
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 10:19:13 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062403.D
Acq On : 24 Jun 2019 9:27 am
Operator : TNL
Sample : 9061200-BS1
Misc : 1X 5mL 20/40PPB VOCR+O A19F269
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 10:19:16 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration

6/24/19 bm

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene (I)	50.000	50.000	0.0	91	0.00
2		Dichlorodifluoromethane	20.000	20.606	-3.0	91	0.01
3	P	Chloromethane	20.000	18.904	5.5	89	0.00
4	C	Vinyl Chloride	20.000	20.715	-3.6	92	0.00
5		Bromomethane	20.000	18.572	7.1	87	0.00
6		Chloroethane	20.000	19.296	3.5	92	0.00
7		Trichlorofluoromethane	20.000	20.808	-4.0	92	0.00
8		Ethanol	1250.000	1324.558	-6.0	96	0.01
9	C	1,1-Dichloroethene	20.000	21.160	-5.8	90	0.00
10		Carbon Disulfide	20.000	19.754	1.2	87	0.00
11		Freon 113	20.000	20.115	-0.6	89	0.00
12		Iodomethane	20.000	10.871 NR	45.6#	58	0.00
13		Acrolein	20.000	20.338	-1.7	94	0.00
14		Methylene Chloride	20.000	19.958	0.2	91	0.00
15		Acetone	40.000	40.681	-1.7	98	0.01
16		t-1,2-Dichloroethene	20.000	20.743	-3.7	91	0.00
17		n-Hexane	20.000	18.509	7.5	79	0.00
18		Methyl-tert-butyl-ether	20.000	20.419	-2.1	91	0.00
19		tert-Butanol (TBA)	1250.000	1380.503	-10.4	97	0.00
20		Diisopropyl ether (DIPE)	5.000	5.083	-1.7	95	0.00
21	P	1,1-Dichloroethane	20.000	21.118	-5.6	93	0.00
22		Acrylonitrile	20.000	21.836	-9.2	97	0.00
23		Ethyl-tert-butyl ether (ET	5.000	5.016	-0.3	90	0.00
24		Vinyl Acetate	20.000	23.161	-15.8	108	0.00
25		c-1,2-Dichloroethene	20.000	21.174	-5.9	94	0.00
26		2,2-Dichloropropane	20.000	21.483	-7.4	96	0.00
27		Bromochloromethane	20.000	21.440	-7.2	91	0.00
28	C	Chloroform	20.000	20.677	-3.4	92	0.00
29		Carbon Tetrachloride	20.000	21.433	-7.2	97	0.00
30		Tetrahydrofuran	20.000	20.680	-3.4	98	0.00
31		1,1,1-Trichloroethane	20.000	21.155	-5.8	93	0.00
32	S	Dibromofluoromethane (S)	50.000	50.920	-1.8	93	0.00
33		1,1-Dichloropropene	20.000	20.634	-3.2	90	0.00
34		2-Butanone (MEK)	40.000	42.907	-7.3	98	0.00
35		Benzene	20.000	20.218	-1.1	91	0.00
36		tert-Amyl methyl ether (TA	5.000	4.983	0.3	91	0.00
37		1,2-Dichloroethane (EDC)	20.000	21.064	-5.3	94	0.00
38		iso-Butyl Alcohol	500.000	555.997	-11.2	101	0.00
39	S	1,4-Difluorobenzene (S)	50.000	50.569	-1.1	92	0.00
40		Trichloroethene (TCE)	20.000	20.484	-2.4	90	0.00
41		Tert-Amyl-Ethyl-Ether (TAEE	5.000	5.076	-1.5	88	0.00
42		Dibromomethane	20.000	21.372	-6.9	92	0.00
43	C	1,2-Dichloropropane	20.000	20.977	-4.9	92	0.00
44		Bromodichloromethane	20.000	21.543	-7.7	96	0.00
45		Chlorobenzene-d5 (I)	50.000	50.000	0.0	92	0.00
46		2-Chloroethyl Vinyl Ether	20.000	19.398	3.0	85	0.00
47		c-1,3-Dichloropropene	20.000	20.680	-3.4	92	0.00
48	S	Toluene-d8 (S)	50.000	50.098	-0.2	93	0.00
49	C	Toluene	20.000	19.472	2.6	90	0.00
50		Tetrachloroethene (PCE)	20.000	19.699	1.5	87	0.00

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062403.D
Acq On : 24 Jun 2019 9:27 am
Operator : TNL
Sample : 9061200-BS1
Misc : 1X 5mL 20/40PPB VOCR+O A19F269
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 10:19:16 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
51		4-Methyl-2-Pentanone (MIBK)	40.000	42.567	-6.4	96	0.00
52		t-1,3-Dichloropropene	20.000	21.423	-7.1	95	0.00
53		1,1,2-Trichloroethane	20.000	20.839	-4.2	92	0.00
54		Dibromochloromethane	20.000	21.799	-9.0	99	0.00
55		1,3-Dichloropropane	20.000	20.726	-3.6	93	0.00
56		1,2-Dibromoethane (EDB)	20.000	21.213	-6.1	91	0.00
57		2-Hexanone	40.000	42.040	-5.1	96	0.00
58	P	Chlorobenzene	20.000	20.325	-1.6	91	0.00
59	C	Ethylbenzene	20.000	20.209	-1.0	90	0.00
60		1,1,1,2-Tetrachloroethane	20.000	22.103	-10.5	96	0.00
61		m,p-Xylenes (2)	40.000	40.556	-1.4	91	0.00
62		o-Xylene	20.000	20.415	-2.1	90	0.00
63		Styrene	20.000	20.863	-4.3	90	0.00
64	P	Bromoform	20.000	22.226	-11.1	103	0.00
65		Isopropylbenzene	20.000	20.500	-2.5	90	0.00
66	I	1,4-Dichlorobenzene-d4 (I)	50.000	50.000	0.0	94	0.00
67	S	4-Bromofluorobenzene (S)	50.000	48.667	2.7	92	0.00
68		Bromobenzene	20.000	19.820	0.9	91	0.00
69		n-Propylbenzene	20.000	19.577	2.1	89	0.00
70	P	1,1,2,2-Tetrachloroethane	20.000	20.799	-4.0	94	0.00
71		2-Chlorotoluene	20.000	19.582	2.1	89	0.00
72		1,3,5-Trimethylbenzene	20.000	19.944	0.3	91	0.00
73		1,2,3-Trichloropropane	20.000	21.114	-5.6	94	0.00
74		t-1,4-Dichloro-2-butene	20.000	20.900	-4.5	91	0.00
75		4-Chlorotoluene	20.000	19.756	1.2	90	0.00
76		tert-Butylbenzene	20.000	19.969	0.2	91	0.00
77		1,2,4-Trimethylbenzene	20.000	20.391	-2.0	92	0.00
78		sec-Butylbenzene	20.000	19.704	1.5	90	0.00
79		4-Isopropyltoluene	20.000	20.659	-3.3	92	0.00
80		1,3-Dichlorobenzene	20.000	19.916	0.4	91	0.00
81		1,4-Dichlorobenzene	20.000	19.793	1.0	92	0.00
82		n-Butylbenzene	20.000	20.153	-0.8	89	0.00
83		1,2-Dichlorobenzene	20.000	20.375	-1.9	93	0.00
84		1,2-Dibromo-3-Chloropropane	20.000	21.112	-5.6	99	0.00
85		Hexachlorobutadiene	20.000	20.650	-3.2	89	0.00
86		1,2,4-Trichlorobenzene	20.000	20.620	-3.1	91	0.00
87		Naphthalene	20.000	20.409	-2.0	91	0.00
88		1,2,3-Trichlorobenzene	20.000	20.618	-3.1	92	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062403.D
Acq On : 24 Jun 2019 9:27 am
Operator : TNL
Sample : 9061200-BS1
Misc : 1X 5mL 20/40PPB VOCR+O A19F269
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

6/24/19 mt

Quant Time: Jun 24 10:19:16 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.223	168	192815	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	9.916	117	295428	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	11.856	152	144113	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	5.724	111	105839	50.92	ug/L		0.00
39) 1,4-Difluorobenzene (S)	6.789	114	324529	50.57	ug/L		0.00
48) Toluene-d8 (S)	8.303	98	386708	50.10	ug/L		0.00
67) 4-Bromofluorobenzene (S)	10.980	174	116198	48.67	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.691	85	41202	20.61	ug/L		98
3) Chloromethane	1.904	50	48122	18.90	ug/L		98
4) Vinyl Chloride	2.007	62	47507	20.72	ug/L		96
5) Bromomethane	2.372	96	21989	18.57	ug/L		99
6) Chloroethane	2.506	64	15713	19.30	ug/L		85
7) Trichlorofluoromethane	2.670	101	53566	20.81	ug/L		95
8) Ethanol	3.248	45	62499	1324.56	ug/L		84
9) 1,1-Dichloroethene	3.242	61	55137	21.16	ug/L		98
10) Carbon Disulfide	3.260	76	92752	19.75	ug/L		99
11) Freon 113	3.297	101	34045	20.12	ug/L		99
12) Iodomethane	3.400	142	8429	10.87	ug/L		91
13) Acrolein	3.631	56	10676	20.34	ug/L		78
14) Methylene Chloride	3.881	84	39815	19.96	ug/L		98
15) Acetone	3.954	43	38198	40.68	ug/L		96
16) t-1,2-Dichloroethene	4.051	61	52793	20.74	ug/L		99
17) n-Hexane	4.130	86	6578	18.51	ug/L	#	81
18) Methyl-tert-butyl-ether	4.179	73	127232	20.42	ug/L		93
19) tert-Butanol (TBA)	4.300	59	578902	1380.50	ug/L		86
20) Diisopropyl ether (DIPE)	4.574	45	33070	5.08	ug/L		93
21) 1,1-Dichloroethane	4.696	63	70824	21.12	ug/L		97
22) Acrylonitrile	4.757	53	23289	21.84	ug/L		100
23) Ethyl-tert-butyl ether...	4.951	59	31607	5.02	ug/L		96
24) Vinyl Acetate	4.964	43	98319	23.16	ug/L		98
25) c-1,2-Dichloroethene	5.249	61	57513	21.17	ug/L		98
26) 2,2-Dichloropropane	5.359	77	56279	21.48	ug/L		97
27) Bromochloromethane	5.456	130	26845	21.44	ug/L		84
28) Chloroform	5.535	83	71595	20.68	ug/L		98
29) Carbon Tetrachloride	5.669	117	45380	21.43	ug/L		94
30) Tetrahydrofuran	5.706	42	22468	20.68	ug/L		89
31) 1,1,1-Trichloroethane	5.742	97	58382	21.15	ug/L		95
33) 1,1-Dichloropropene	5.870	75	54282	20.63	ug/L		97
34) 2-Butanone (MEK)	5.864	43	67097	42.91	ug/L		97
35) Benzene	6.132	78	162622	20.22	ug/L		97
36) tert-Amyl methyl ether...	6.253	73	30149	4.98	ug/L		96
37) 1,2-Dichloroethane (EDC)	6.351	62	55934	21.06	ug/L		93
38) iso-Butyl Alcohol	6.381	43	88722	556.00	ug/L		90
40) Trichloroethene (TCE)	6.752	130	39858	20.48	ug/L		95
41) Tert-Amyl-Ethyl-Ether ...	7.008	59	23605	5.08	ug/L		87
42) Dibromomethane	7.208	93	27351	21.37	ug/L		93
43) 1,2-Dichloropropane	7.318	63	43212	20.98	ug/L		91
44) Bromodichloromethane	7.385	83	51202	21.54	ug/L		93
46) 2-Chloroethyl Vinyl Ether	8.030	63	31486	19.40	ug/L	#	100
47) c-1,3-Dichloropropene	8.097	75	62756	20.68	ug/L		94

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062403.D
Acq On : 24 Jun 2019 9:27 am
Operator : TNL
Sample : 9061200-BS1
Misc : 1X 5mL 20/40PPB VOCR+O A19F269
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 10:19:16 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration

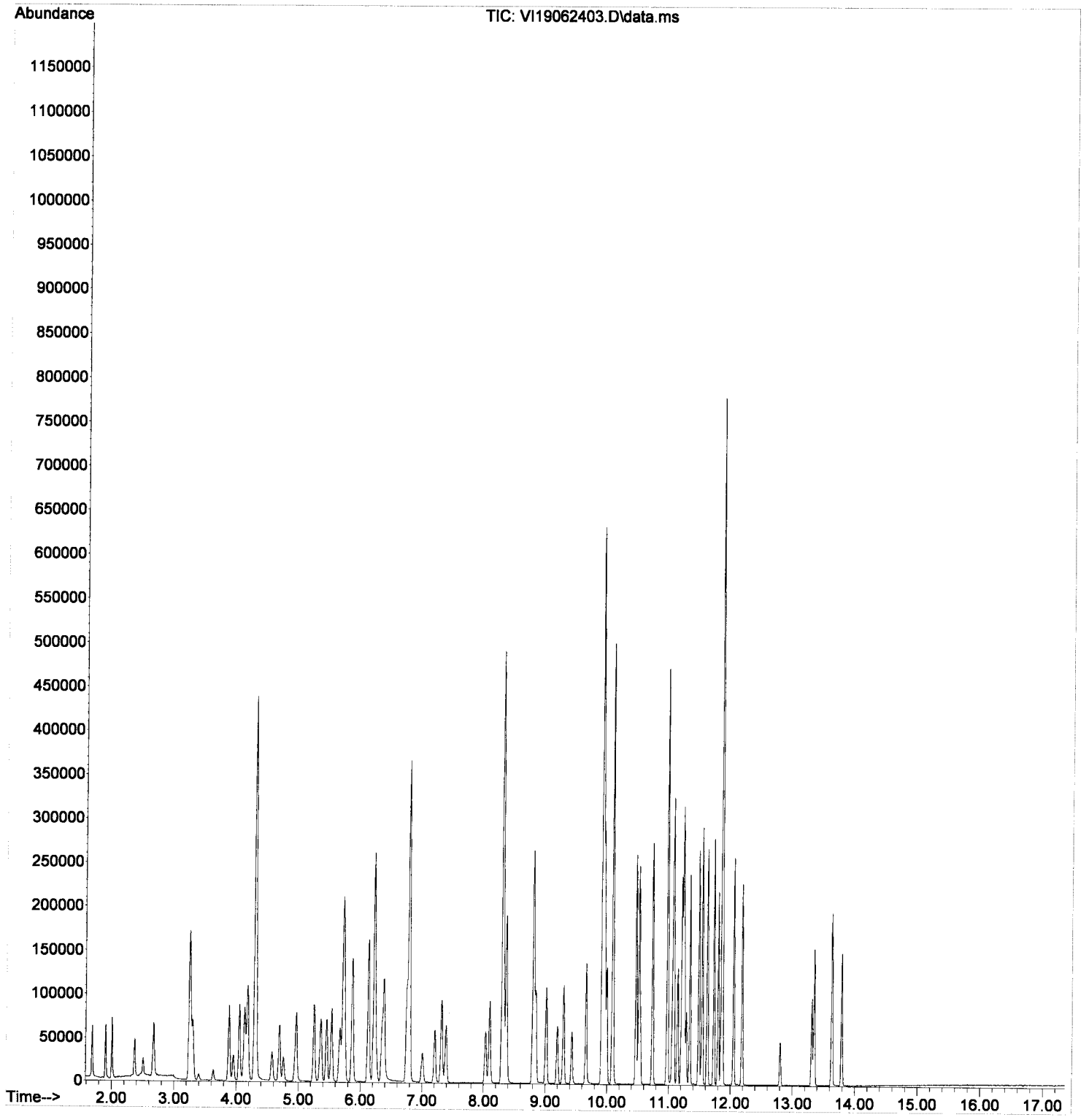
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Toluene	8.364	91	164092	19.47	ug/L		98
50) Tetrachloroethene (PCE)	8.802	166	37710	19.70	ug/L		88
51) 4-Methyl-2-Pentanone (...	8.808	43	125772	42.57	ug/L		99
52) t-1,3-Dichloropropene	8.845	75	59526	21.42	ug/L		96
53) 1,1,2-Trichloroethane	9.015	97	38739	20.84	ug/L		96
54) Dibromochloromethane	9.192	129	38003	21.80	ug/L		96
55) 1,3-Dichloropropane	9.295	76	68667	20.73	ug/L		98
56) 1,2-Dibromoethane (EDB)	9.429	107	41528	21.21	ug/L		98
57) 2-Hexanone	9.660	43	91465	42.04	ug/L		94
58) Chlorobenzene	9.934	112	104149	20.32	ug/L		93
59) Ethylbenzene	9.958	91	178371	20.21	ug/L		99
60) 1,1,1,2-Tetrachloroethane	9.995	131	34582	22.10	ug/L		98
61) m,p-Xylenes (2)	10.092	91	269663	40.56	ug/L		97
62) o-Xylene	10.469	91	138362	20.41	ug/L		97
63) Styrene	10.518	104	108030	20.86	ug/L		92
64) Bromoform	10.542	173	25317	22.23	ug/L		96
65) Isopropylbenzene	10.737	105	164557	20.50	ug/L		99
68) Bromobenzene	11.059	156	43781	19.82	ug/L	#	75
69) n-Propylbenzene	11.078	91	192029	19.58	ug/L		97
70) 1,1,2,2-Tetrachloroethane	11.144	85	38486	20.80	ug/L		93
71) 2-Chlorotoluene	11.211	126	38800	19.58	ug/L		88
72) 1,3,5-Trimethylbenzene	11.236	105	132226	19.94	ug/L		99
73) 1,2,3-Trichloropropane	11.254	110	17940	21.11	ug/L		94
74) t-1,4-Dichloro-2-butene	11.284	53	14986	20.90	ug/L		78
75) 4-Chlorotoluene	11.339	91	121357	19.76	ug/L		93
76) tert-Butylbenzene	11.485	91	76293	19.97	ug/L		91
77) 1,2,4-Trimethylbenzene	11.540	105	135533	20.39	ug/L		93
78) sec-Butylbenzene	11.625	105	162015	19.70	ug/L		99
79) 4-Isopropyltoluene	11.728	119	134060	20.66	ug/L		100
80) 1,3-Dichlorobenzene	11.801	146	76983	19.92	ug/L		99
81) 1,4-Dichlorobenzene	11.868	146	78982	19.79	ug/L		97
82) n-Butylbenzene	12.051	91	119946	20.15	ug/L		97
83) 1,2-Dichlorobenzene	12.185	146	76284	20.38	ug/L		99
84) 1,2-Dibromo-3-Chloropr...	12.805	157	12337	21.11	ug/L		84
85) Hexachlorobutadiene	13.310	223	11145	20.65	ug/L		90
86) 1,2,4-Trichlorobenzene	13.347	180	44405	20.62	ug/L		98
87) Naphthalene	13.633	128	143763	20.41	ug/L		96
88) 1,2,3-Trichlorobenzene	13.791	180	43105	20.62	ug/L		94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062403.D
Acq On : 24 Jun 2019 9:27 am
Operator : TNL
Sample : 9061200-BS1
Misc : 1X 5mL 20/40PPB VOCR+O A19F269
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 10:19:16 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062404.D
Acq On : 24 Jun 2019 9:54 am
Operator : TNL
Sample : 9061200-BS2
Misc : 1X 5mL 500PPB GX A19F151
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 10:19:48 2019
Quant Method : C:\msdchem\1\methods\VI190621G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Jun 21 11:04:13 2019
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene (IS)	50.000	50.000	0.0	100	0.00
2	S	1,4-Difluorobenzene (Sur)	50.000	49.216	1.6	99	0.00
3	S	4-Bromofluorobenzene (Sur)	50.000	49.343	1.3	99	0.00
4	H	NWTPH-Gx (TPH)	500.000	481.710	3.7	96	0.00
5	H	TPHg (C5-C9)	500.000	495.913	0.8	99	0.00
6	H	TPHg (C6-C10)	500.000	501.147	-0.2	99	0.00
7	H	CA-LUFT (C5-C12)	500.000	487.275	2.5	98	0.00
8		Benzene (NR)	-1.000	0.000	0.0	101	0.00
9	S	Toluene-d8 (NR)	-1.000	0.000	0.0	98	0.00
10		Toluene (NR)	-1.000	0.000	0.0	99	0.00
11	S	Chlorobenzene-d5 (NR)	-1.000	0.000	0.0	99	0.00
12	S	1,4-Dichlorobenzene-d4 (NR)	-1.000	0.000	0.0	98	0.00
13		Naphthalene (NR)	-1.000	0.000	0.0	120	0.00

6/24/19

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062404.D
Acq On : 24 Jun 2019 9:54 am
Operator : TNL
Sample : 9061200-BS2
Misc : 1X 5mL 500PPB GX A19F151
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 10:19:48 2019
Quant Method : C:\msdchem\1\methods\VI190621G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Jun 21 11:04:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Pentafluorobenzene (IS)	6.223	168	193233	50.00 ug/L	0.00
System Monitoring Compounds					
2) 1,4-Difluorobenzene (Sur)	6.783	114	319868	49.22 ug/L	0.00
3) 4-Bromofluorobenzene (...	10.974	174	111470	49.34 ug/L	0.00
9) Toluene-d8 (NR)	8.303	98	377544	0.00 ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.916	117	289724	0.00 ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.856	150	210802	0.00 ug/L	0.00
Target Compounds					Qvalue
4) NWTPH-Gx (TPH)	9.890	TIC	2926942m	481.71 ug/L	
5) TPHg (C5-C9)	9.890	TIC	4193343m	495.91 ug/L	
6) TPHg (C6-C10)	9.890	TIC	3576432m	501.15 ug/L	
7) CA-LUFT (C5-C12)	9.890	TIC	4910004m	487.27 ug/L	

6/24/19 tw

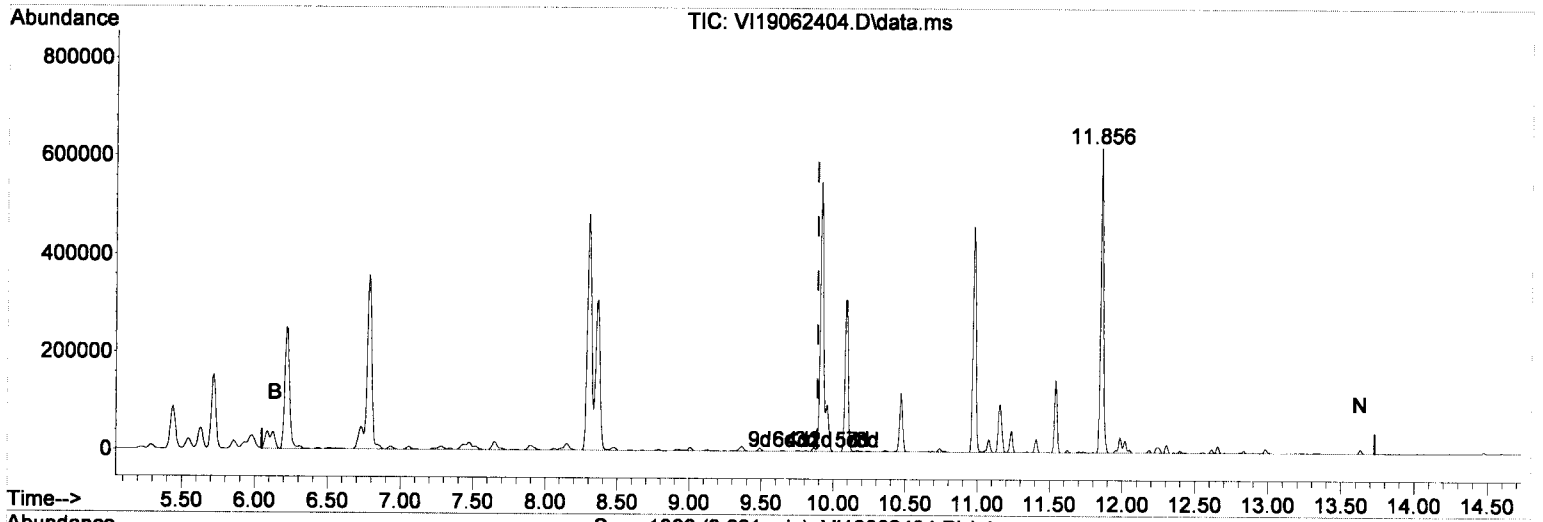
NR

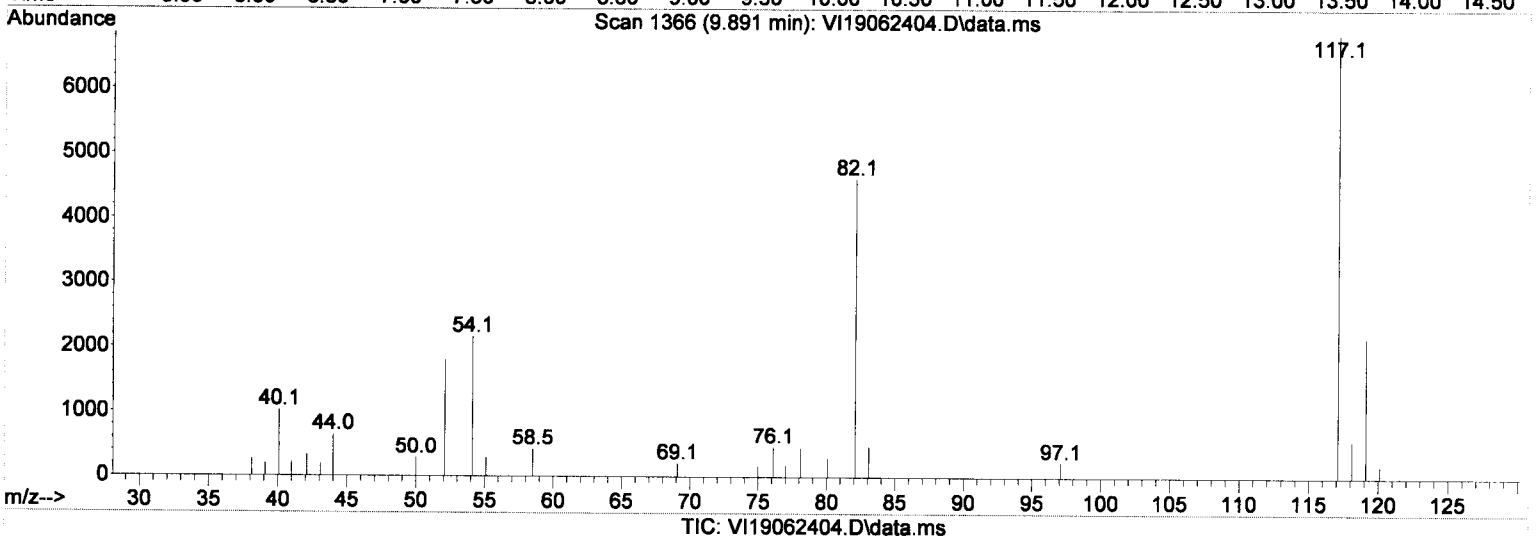
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062404.D
Acq On : 24 Jun 2019 9:54 am
Operator : TNL
Sample : 9061200-BS2
Misc : 1X 5mL 500PPB GX A19F151
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 10:19:48 2019
Quant Method : C:\msdchem\1\methods\VI190621G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Jun 21 11:04:13 2019
Response via : Initial Calibration





(4) NWTPH-Gx (TPH) (H)

9.890min (0.000) 481.71 ug/L m

response 2926942

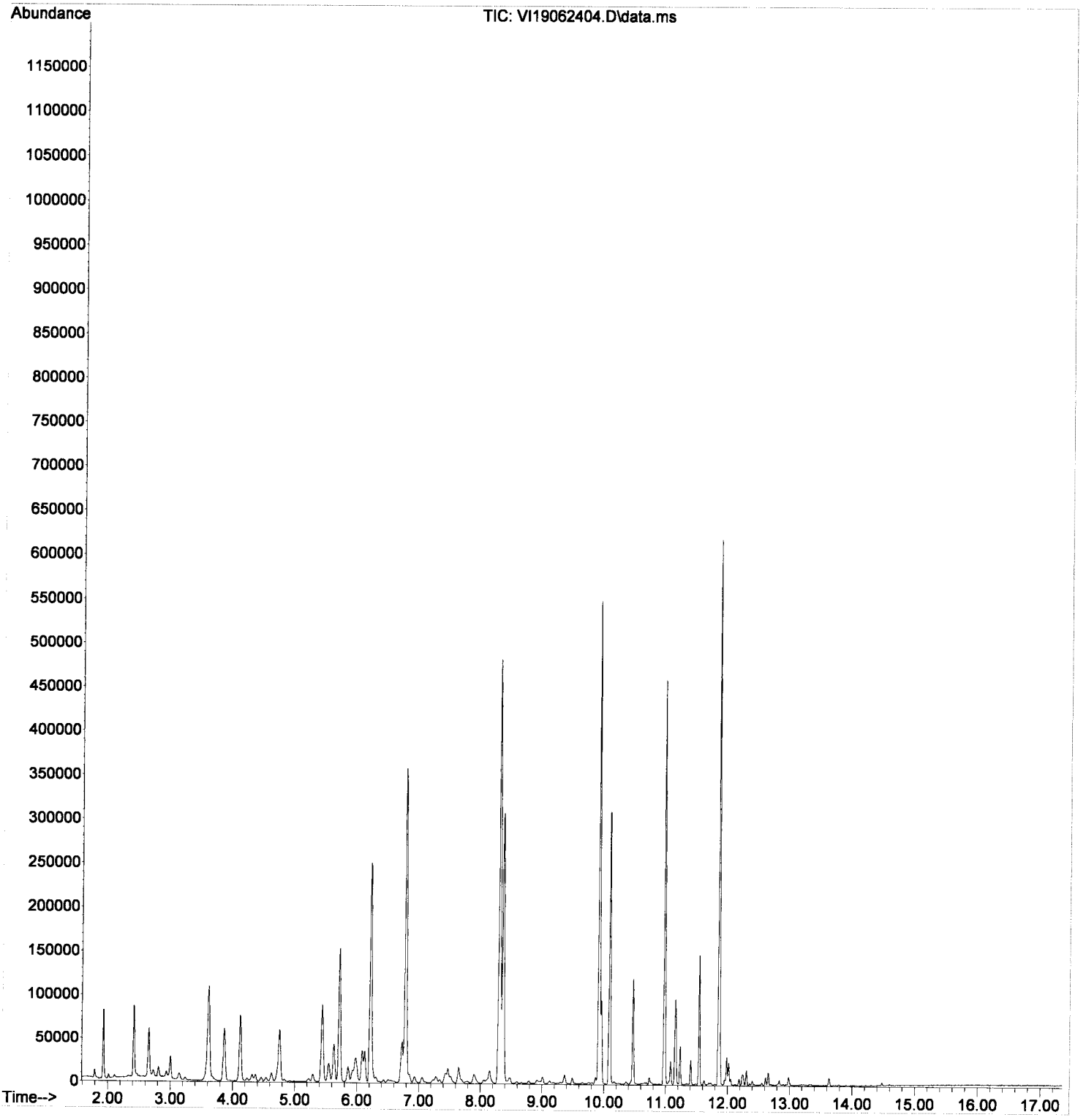
Signal	Exp%	Act%
TIC	100.00	100.00
0.00	0.00	0.02#
0.00	0.00	0.01#
0.00	0.00	0.00

6/24/19 hm

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062404.D
Acq On : 24 Jun 2019 9:54 am
Operator : TNL
Sample : 9061200-BS2
Misc : 1X 5mL 500PPB GX A19F151
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 10:19:48 2019
Quant Method : C:\msdchem\1\methods\VI190621G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Jun 21 11:04:13 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062405.D
Acq On : 24 Jun 2019 10:21 am
Operator : TNL
Sample : 9061200-BLK1
Misc : 1X 5mL DI
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 11:28:22 2019
Quant Method : C:\msdchem\1\methods\VI190621G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Jun 21 11:04:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.223	168	184427	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.789	114	309461	49.89	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.980	174	102523	47.55	ug/L	0.00
9) Toluene-d8 (NR)	8.304	98	365642	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.916	117	276933	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.856	150	193367	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.890	TIC	34037m	30.74	ug/L	
5) TPHg (C5-C9)	9.890	TIC	320110m	15.58	ug/L	
6) TPHg (C6-C10)	9.890	TIC	309884m	21.96	ug/L	
7) CA-LUFT (C5-C12)	9.890	TIC	358624m	19.45	ug/L	

6/24/19 MC

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062405.D
Acq On : 24 Jun 2019 10:21 am
Operator : TNL
Sample : 9061200-BLK1
Misc : 1X 5mL DI
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 11:28:04 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Pentafluorobenzene (I)	6.223	168	184427	50.00 ug/L	0.00
45) Chlorobenzene-d5 (I)	9.916	117	276933	50.00 ug/L	0.00
66) 1,4-Dichlorobenzene-d4...	11.856	152	123478	50.00 ug/L	0.00
System Monitoring Compounds					
32) Dibromofluoromethane (S)	5.718	111	100459	50.53 ug/L	0.00
39) 1,4-Difluorobenzene (S)	6.789	114	309461	50.41 ug/L	0.00
48) Toluene-d8 (S)	8.304	98	365642	50.53 ug/L	0.00
67) 4-Bromofluorobenzene (S)	10.980	174	102523	50.11 ug/L	0.00
Target Compounds					Qvalue
3) Chloromethane	1.898	50	274	0.11 ug/L #	47
5) Bromomethane	2.366	96	186	0.16 ug/L #	47
6) Chloroethane	2.524	64	188	0.24 ug/L #	36
14) Methylene Chloride	3.875	84	2223	Below Cal	88
15) Acetone	3.948	43	527	0.59 ug/L #	44

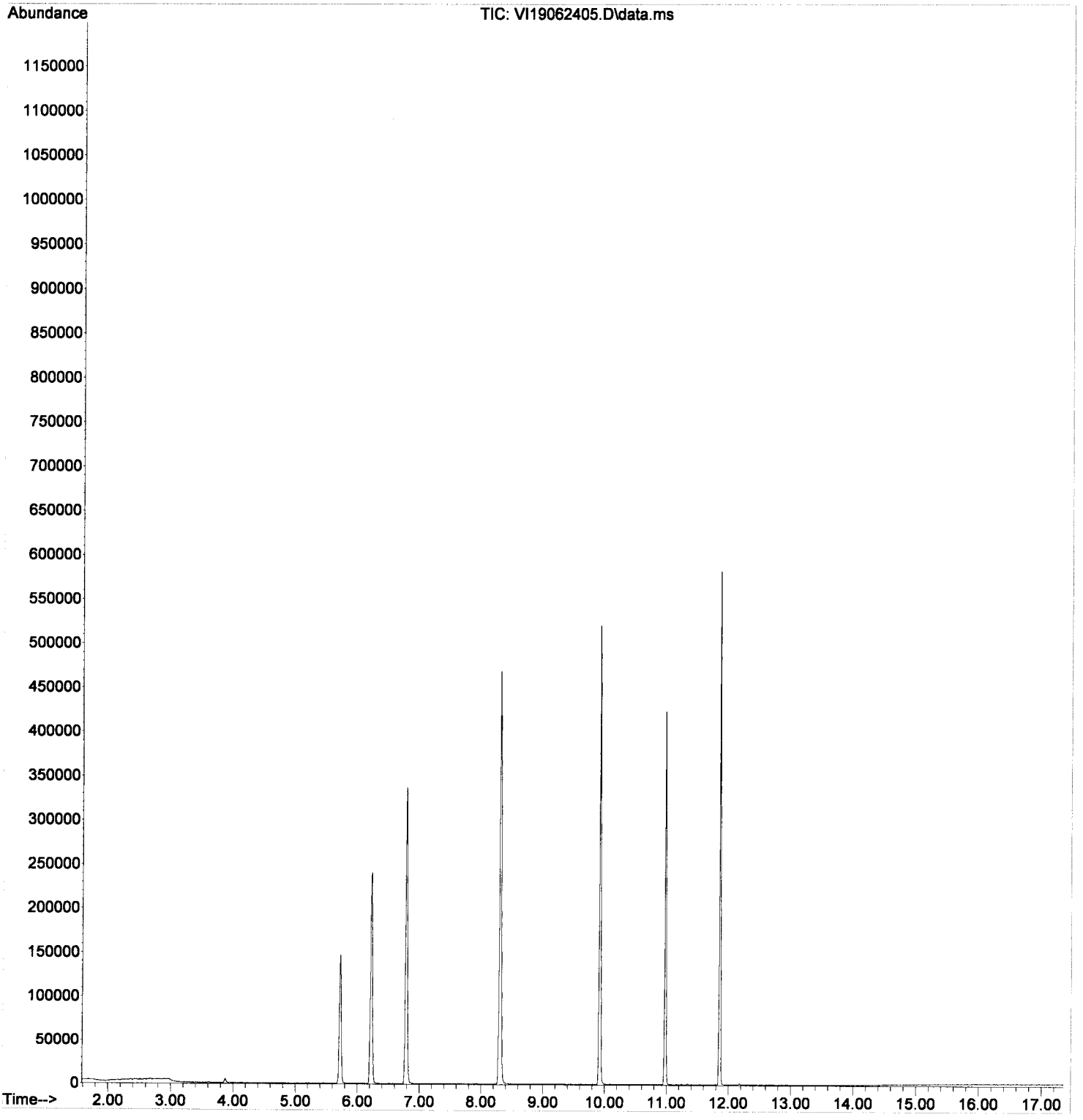
6/24/19 tm

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062405.D
Acq On : 24 Jun 2019 10:21 am
Operator : TNL
Sample : 9061200-BLK1
Misc : 1X 5mL DI
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 11:28:04 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062406.D
Acq On : 24 Jun 2019 10:48 am
Operator : TNL
Sample : A9F0692-01
Misc : 1X 5mL 8260C TB
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 11:28:08 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration

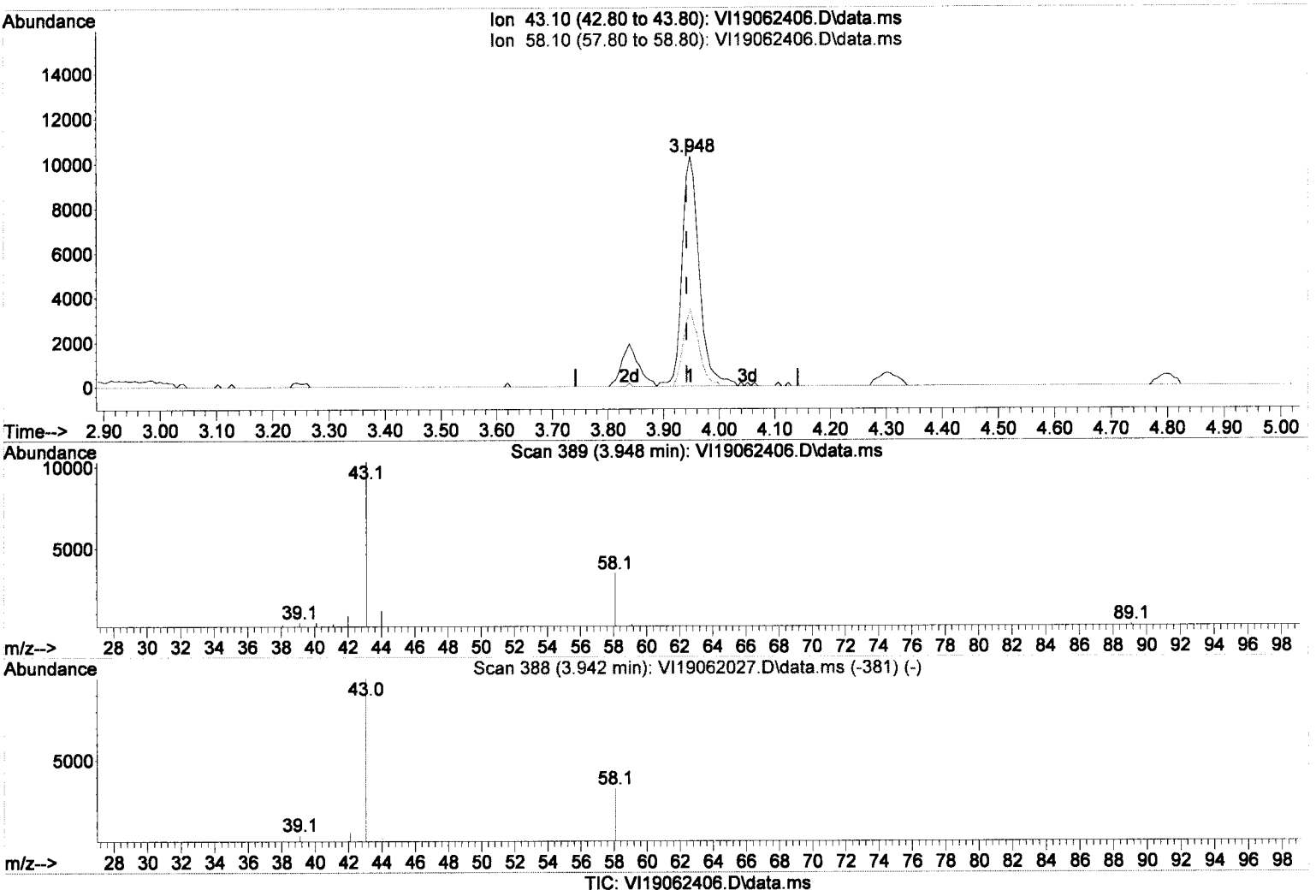
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.223	168	167630	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	9.916	117	247956	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	11.856	152	111412	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	5.718	111	91847	50.83	ug/L		0.00
39) 1,4-Difluorobenzene (S)	6.789	114	285209	51.12	ug/L		0.00
48) Toluene-d8 (S)	8.303	98	331378	51.15	ug/L		0.00
67) 4-Bromofluorobenzene (S)	10.980	174	93660	50.74	ug/L		0.00
Target Compounds							Qvalue
3) Chloromethane	1.897	50	254	0.11	ug/L	#	47
6) Chloroethane	2.500	64	200	0.28	ug/L	#	36
8) Ethanol	3.242	45	191	4.66	ug/L	#	29
14) Methylene Chloride	3.881	84	325	Below Cal		#	70
15) Acetone	3.948	43	22119	27.10	ug/L		95
19) tert-Butanol (TBA)	4.300	59	9154	25.11	ug/L		97
34) 2-Butanone (MEK)	5.882	43	235	0.17	ug/L		52
38) iso-Butyl Alcohol	6.393	43	347	2.50	ug/L	#	18
49) Toluene	8.364	91	835	0.12	ug/L		89
87) Naphthalene	13.633	128	667	0.12	ug/L		81

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062406.D
Acq On : 24 Jun 2019 10:48 am
Operator : TNL
Sample : A9F0692-01
Misc : 1X 5mL 8260C TB
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 11:28:08 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



TIC: VI19062406.D\data.ms

(15) Acetone

3.948min (+ 0.006) 27.10 ug/L

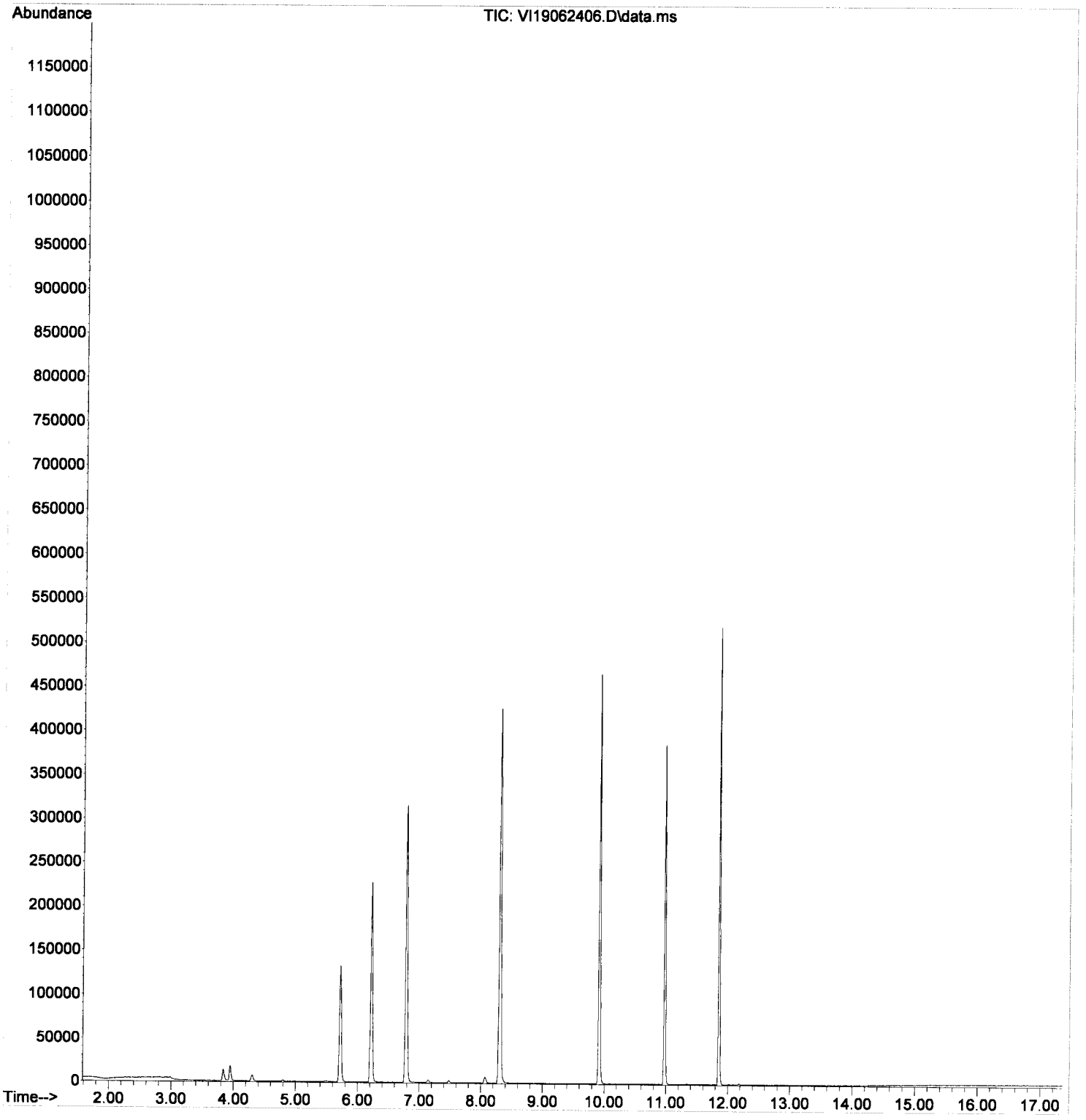
response 22119

Ion	Exp%	Act%
43.10	100.00	100.00
58.10	30.80	33.56
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062406.D
Acq On : 24 Jun 2019 10:48 am
Operator : TNL
Sample : A9F0692-01
Misc : 1X 5mL 8260C TB
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 11:28:08 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062407.D
Acq On : 24 Jun 2019 11:15 am
Operator : TNL
Sample : A9F0692-02@100
Misc : 100X 500uL/50mL 8260C
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 14:22:00 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Pentafluorobenzene (I)	6.223	168	174524	50.00 ug/L	0.00
45) Chlorobenzene-d5 (I)	9.916	117	260097	50.00 ug/L	0.00
66) 1,4-Dichlorobenzene-d4...	11.856	152	118113	50.00 ug/L	0.00
System Monitoring Compounds					
32) Dibromofluoromethane (S)	5.724	111	95232	50.62 ug/L	0.00
39) 1,4-Difluorobenzene (S)	6.789	114	295872	50.94 ug/L	0.00
48) Toluene-d8 (S)	8.303	98	345795	50.88 ug/L	0.00
67) 4-Bromofluorobenzene (S)	10.980	174	98103	50.13 ug/L	0.00
Target Compounds					Qvalue
3) Chloromethane	1.904	50	237	0.10 ug/L #	47
6) Chloroethane	2.512	64	122	0.17 ug/L #	36
10) Carbon Disulfide	3.260	76	928	0.22 ug/L	78
14) Methylene Chloride	3.875	84	1932	Below Cal	98
15) Acetone	3.954	43	800	0.94 ug/L #	44
35) Benzene	6.126	78	333913	45.86 ug/L	97
36) tert-Amyl methyl ether...	6.132	73	5116	0.93 ug/L #	46
49) Toluene	8.364	91	83038	11.19 ug/L	96
59) Ethylbenzene	9.958	91	6753	0.87 ug/L	98
61) m,p-Xylenes (2)	10.092	91	15832	2.70 ug/L	98
62) o-Xylene	10.469	91	6570	1.10 ug/L	98
63) Styrene	10.518	104	4929	1.08 ug/L	91
72) 1,3,5-Trimethylbenzene	11.236	105	1413	0.26 ug/L	93
76) tert-Butylbenzene	11.540	91	387	0.12 ug/L #	57
77) 1,2,4-Trimethylbenzene	11.540	105	4066	0.75 ug/L	98
82) n-Butylbenzene	11.990	91	1456	0.30 ug/L #	31
87) Naphthalene	13.633	128	249625	43.24 ug/L	95

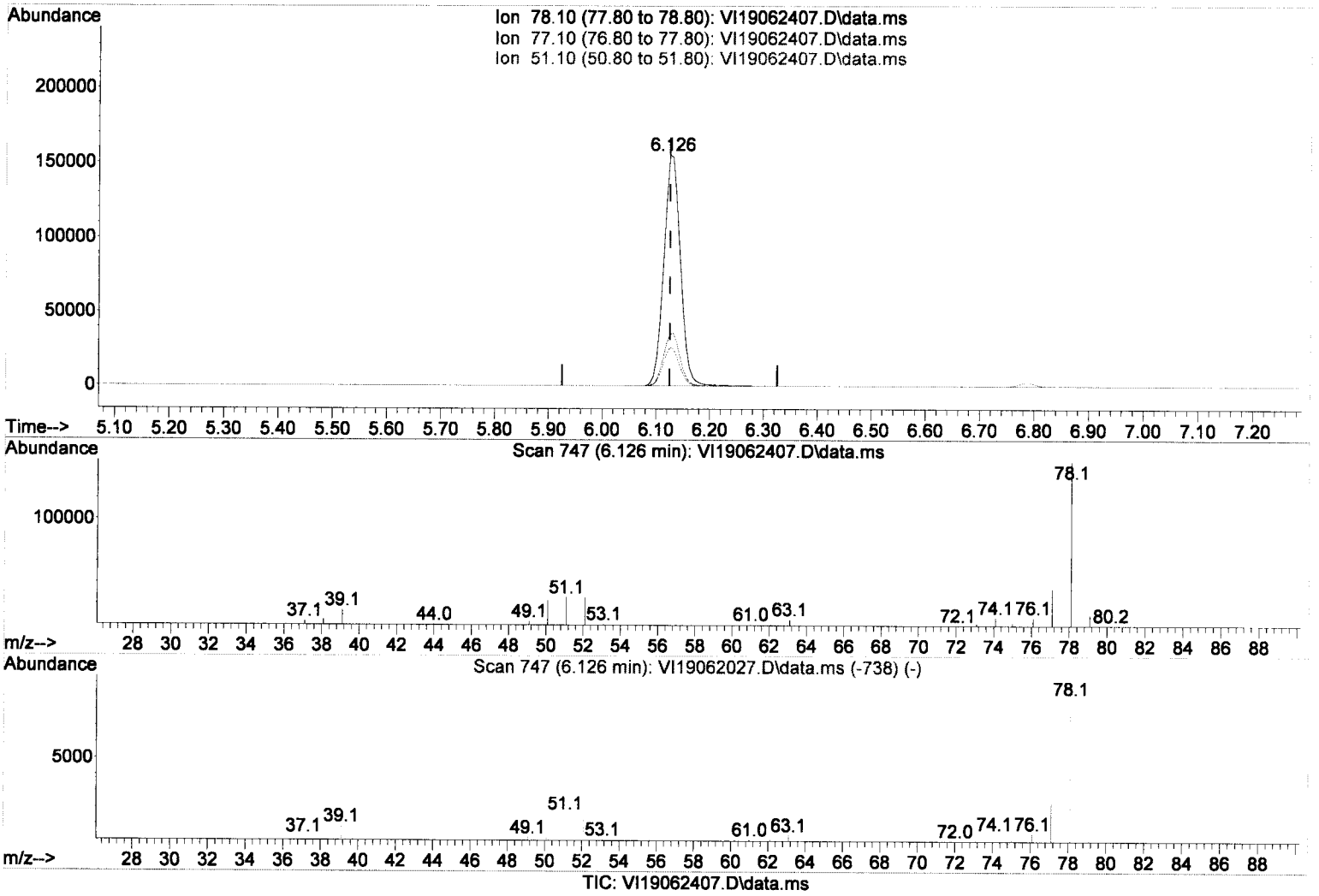
(#) = qualifier out of range (m) = manual integration (+) = signals summed

6/24/19 tnl

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062407.D
Acq On : 24 Jun 2019 11:15 am
Operator : TNL
Sample : A9F0692-02@100
Misc : 100X 500uL/50mL 8260C
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 14:22:00 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



TIC: VI19062407.D\data.ms

(35) Benzene

6.126min (-0.000) 45.86 ug/L

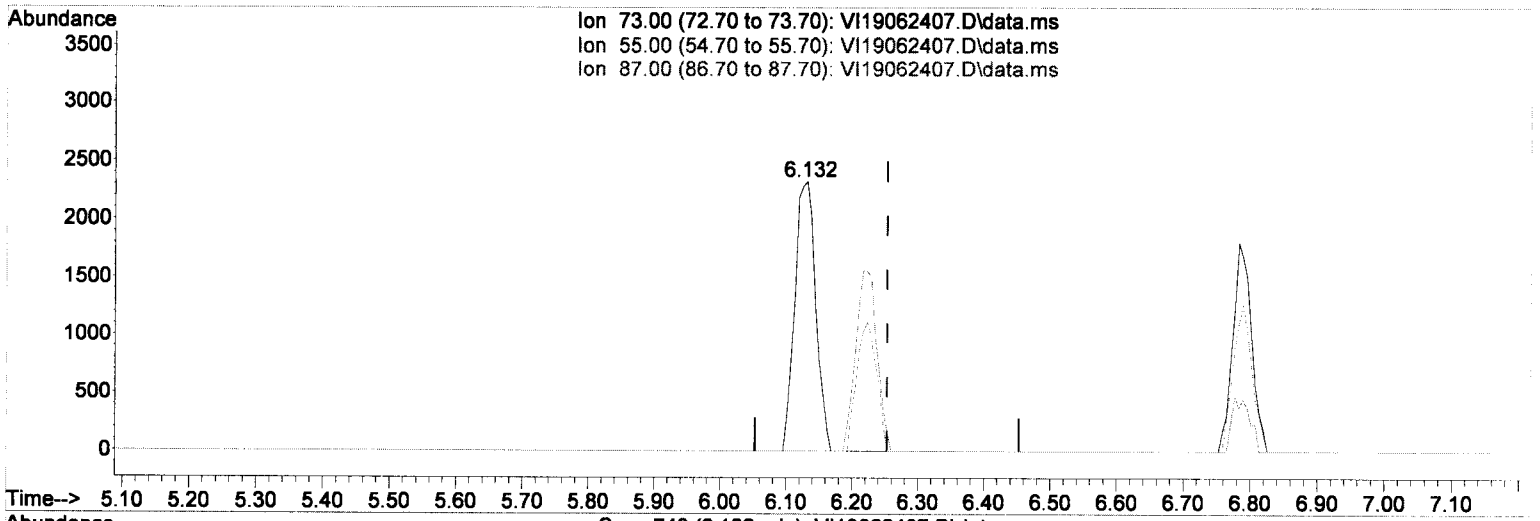
response 333913

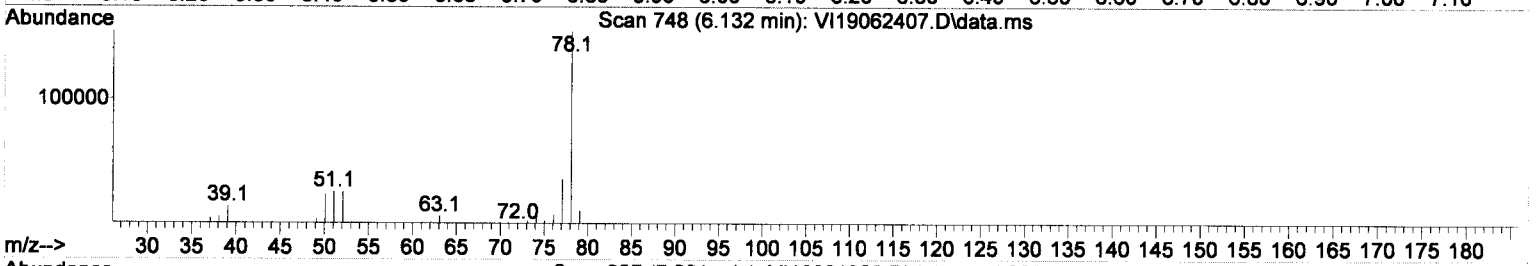
Ion	Exp%	Act%
78.10	100.00	100.00
77.10	24.70	22.34
51.10	17.20	16.76
0.00	0.00	0.00

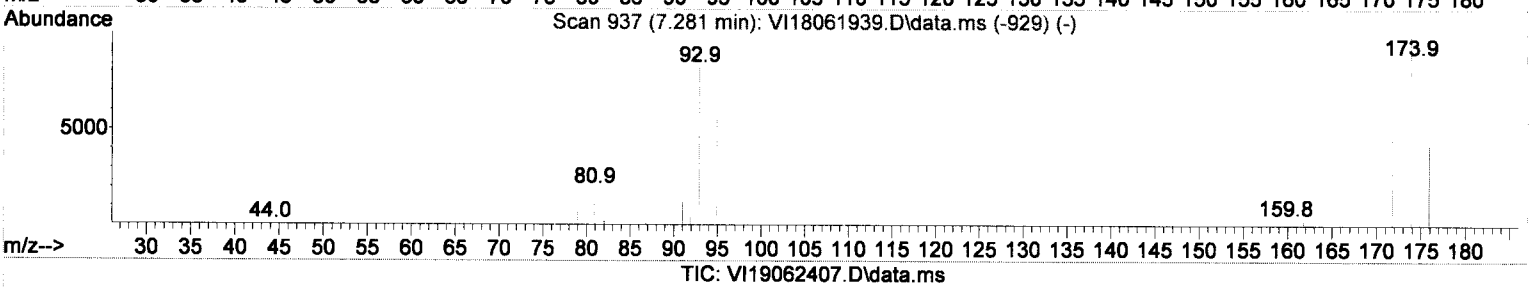
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062407.D
Acq On : 24 Jun 2019 11:15 am
Operator : TNL
Sample : A9F0692-02@100
Misc : 100X 500uL/50mL 8260C
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 14:22:00 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration







TIC: VI19062407.D\data.ms

(36) tert-Amyl methyl ether (TAME)

6.132min (-0.121) 0.93 ug/L

response 5116

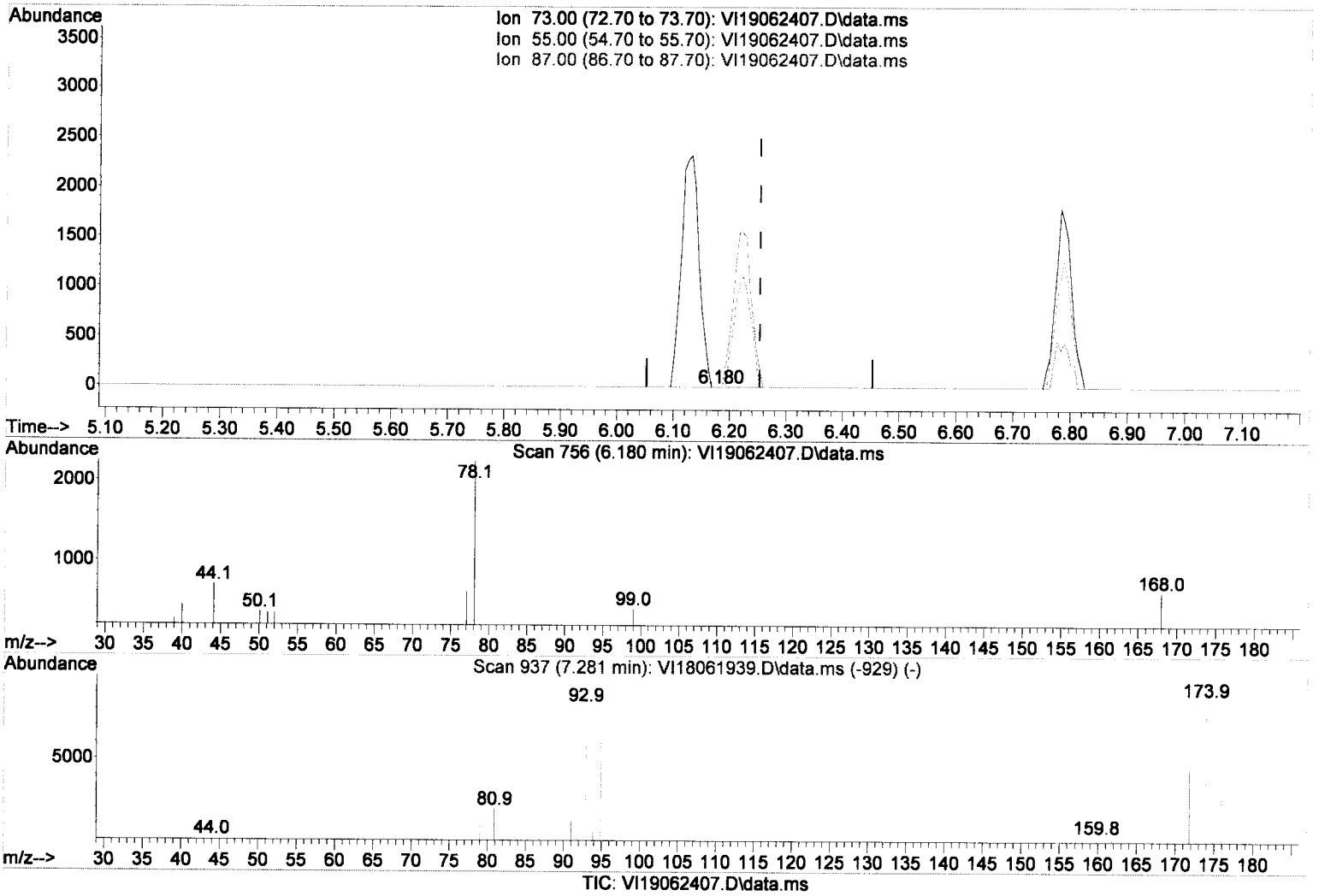
Ion	Exp%	Act%
73.00	100.00	100.00
55.00	32.20	0.00#
87.00	24.60	0.00
0.00	0.00	0.00

(MT) 6/24/19

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062407.D
Acq On : 24 Jun 2019 11:15 am
Operator : TNL
Sample : A9F0692-02@100
Misc : 100X 500uL/50mL 8260C
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 14:22:00 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



TIC: VI19062407.D\data.ms

(36) tert-Amyl methyl ether (TAME)

6.180min (-0.073) 0.00 ug/L m

response 0

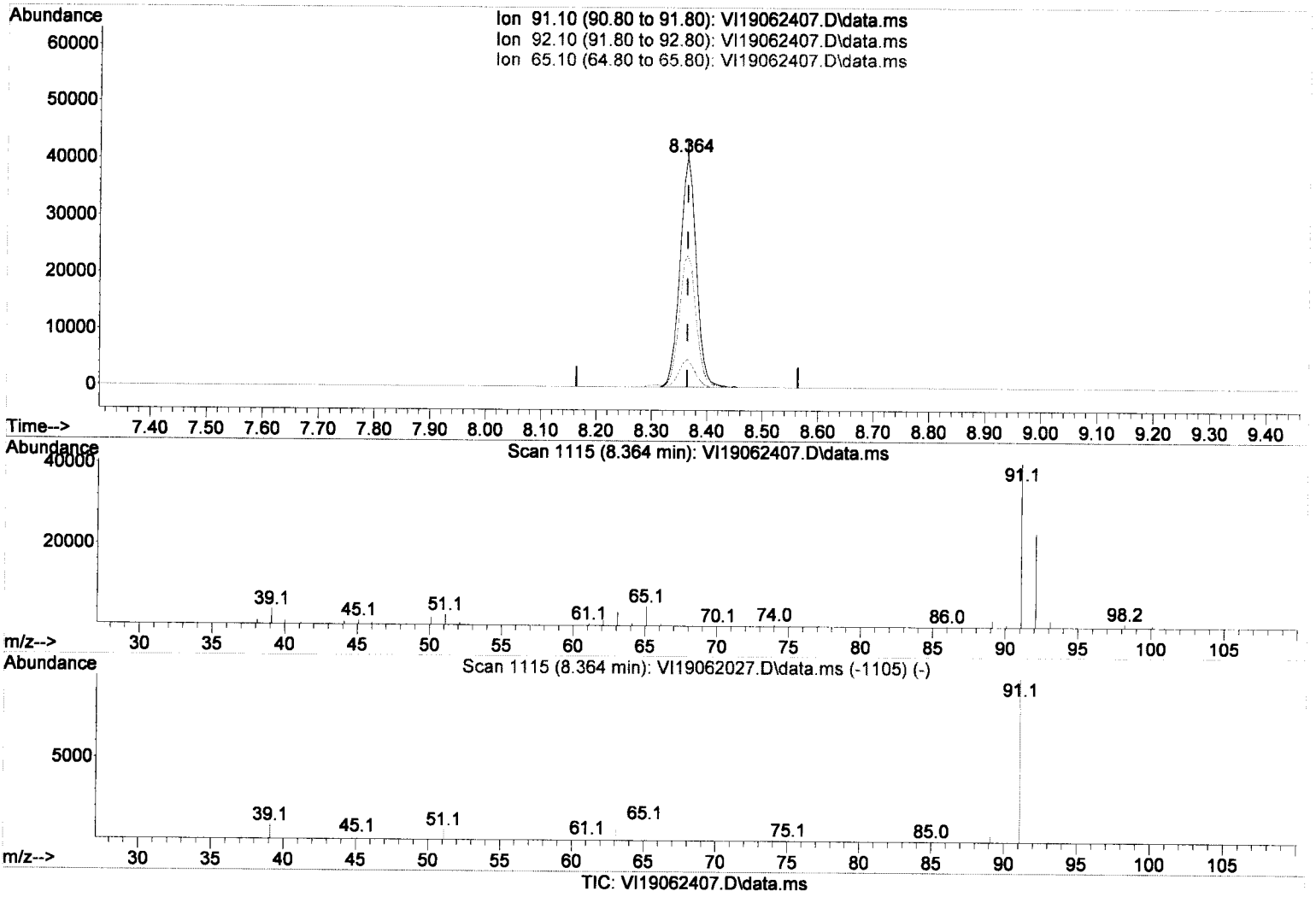
Ion	Exp%	Act%
73.00	100.00	0.00
55.00	32.20	0.00#
87.00	24.60	0.00
0.00	0.00	0.00

ND
6/25/19 hm

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062407.D
Acq On : 24 Jun 2019 11:15 am
Operator : TNL
Sample : A9F0692-02@100
Misc : 100X 500uL/50mL 8260C
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 14:22:00 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



TIC: VI19062407.D\data.ms

(49) Toluene (C)

8.364min (-0.000) 11.19 ug/L

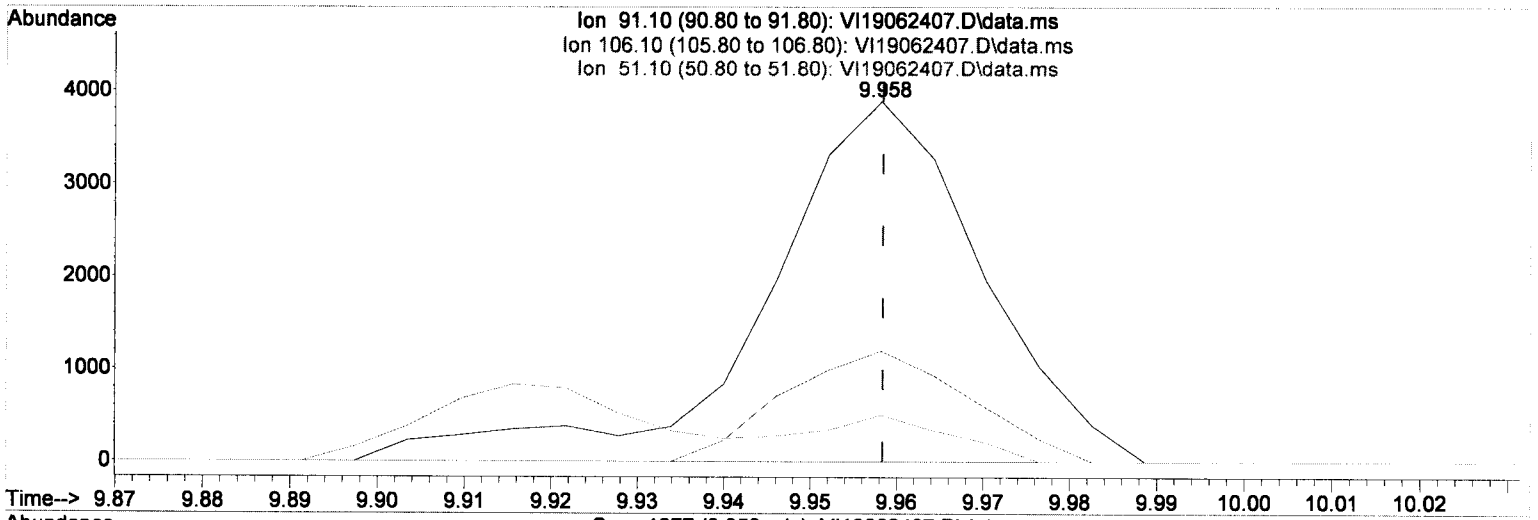
response 83038

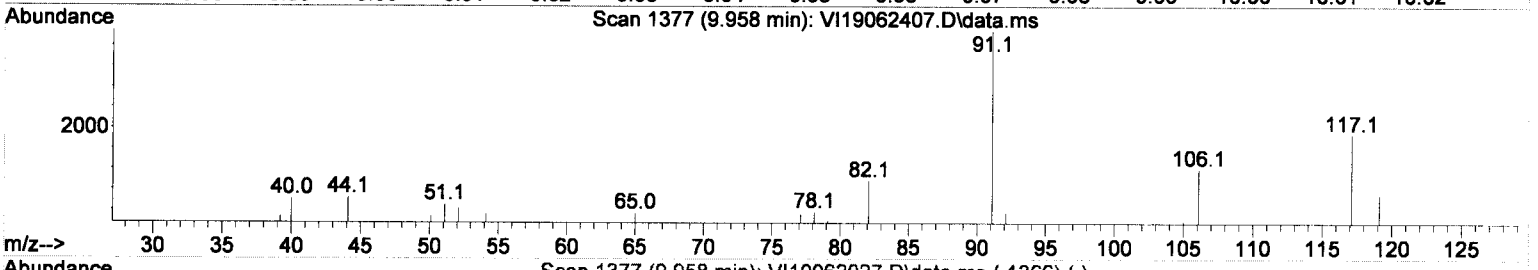
Ion	Exp%	Act%
91.10	100.00	100.00
92.10	59.80	57.08
65.10	10.30	12.14
0.00	0.00	0.00

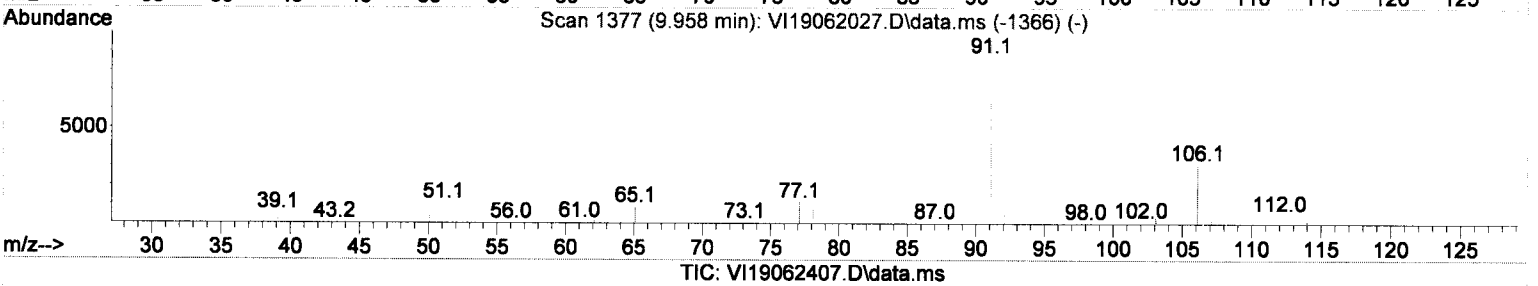
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062407.D
Acq On : 24 Jun 2019 11:15 am
Operator : TNL
Sample : A9F0692-02@100
Misc : 100X 500uL/50mL 8260C
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 14:22:00 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration







TIC: VI19062407.D\data.ms

(59) Ethylbenzene (C)

9.958min (-0.000) 0.87 ug/L

response 6753

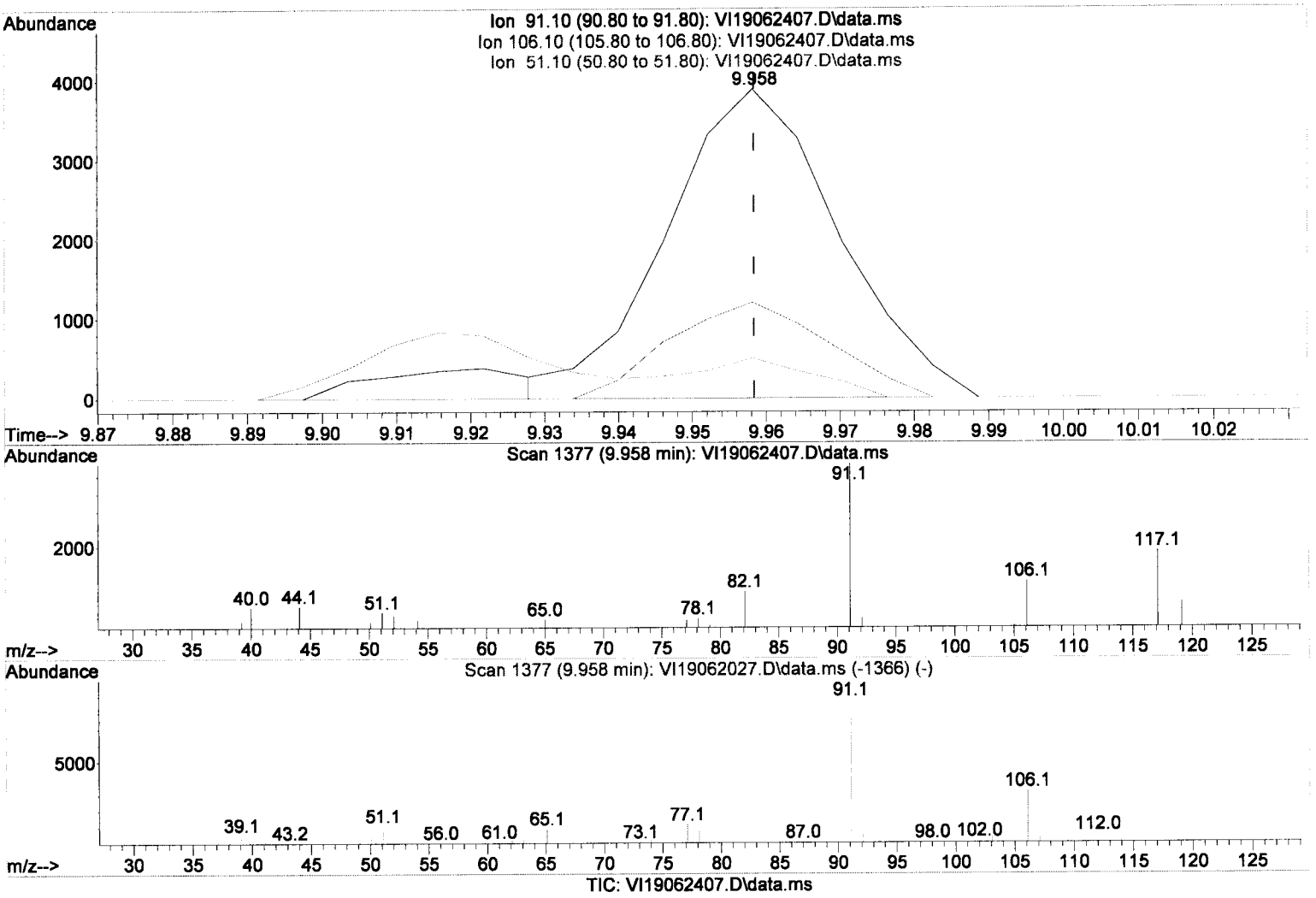
Ion	Exp%	Act%
91.10	100.00	100.00
106.10	30.80	30.87
51.10	10.40	12.95
0.00	0.00	0.00

(MI) 6/28/19 tm

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062407.D
Acq On : 24 Jun 2019 11:15 am
Operator : TNL
Sample : A9F0692-02@100
Misc : 100X 500uL/50mL 8260C
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 14:22:00 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



(59) Ethylbenzene (C)

9.958min (-0.000) 0.80 ug/L m

response 6202

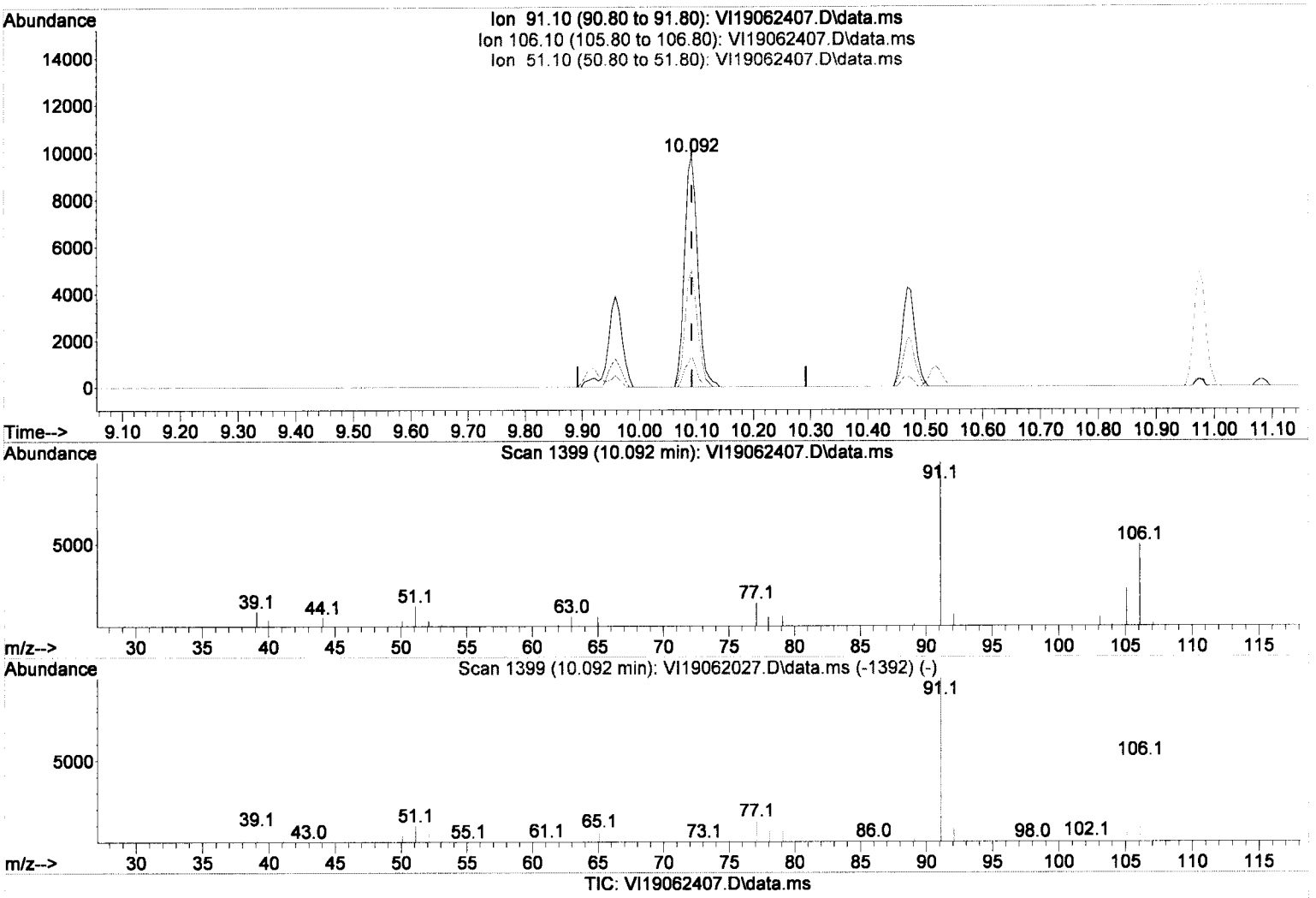
Ion	Exp%	Act%
91.10	100.00	100.00
106.10	30.80	30.87
51.10	10.40	12.95
0.00	0.00	0.00

6/24/19 hm

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062407.D
Acq On : 24 Jun 2019 11:15 am
Operator : TNL
Sample : A9F0692-02@100
Misc : 100X 500uL/50mL 8260C
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 14:22:00 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



TIC: VI19062407.D\data.ms

(61) m,p-Xylenes (2)

10.092min (+ 0.000) 2.70 ug/L

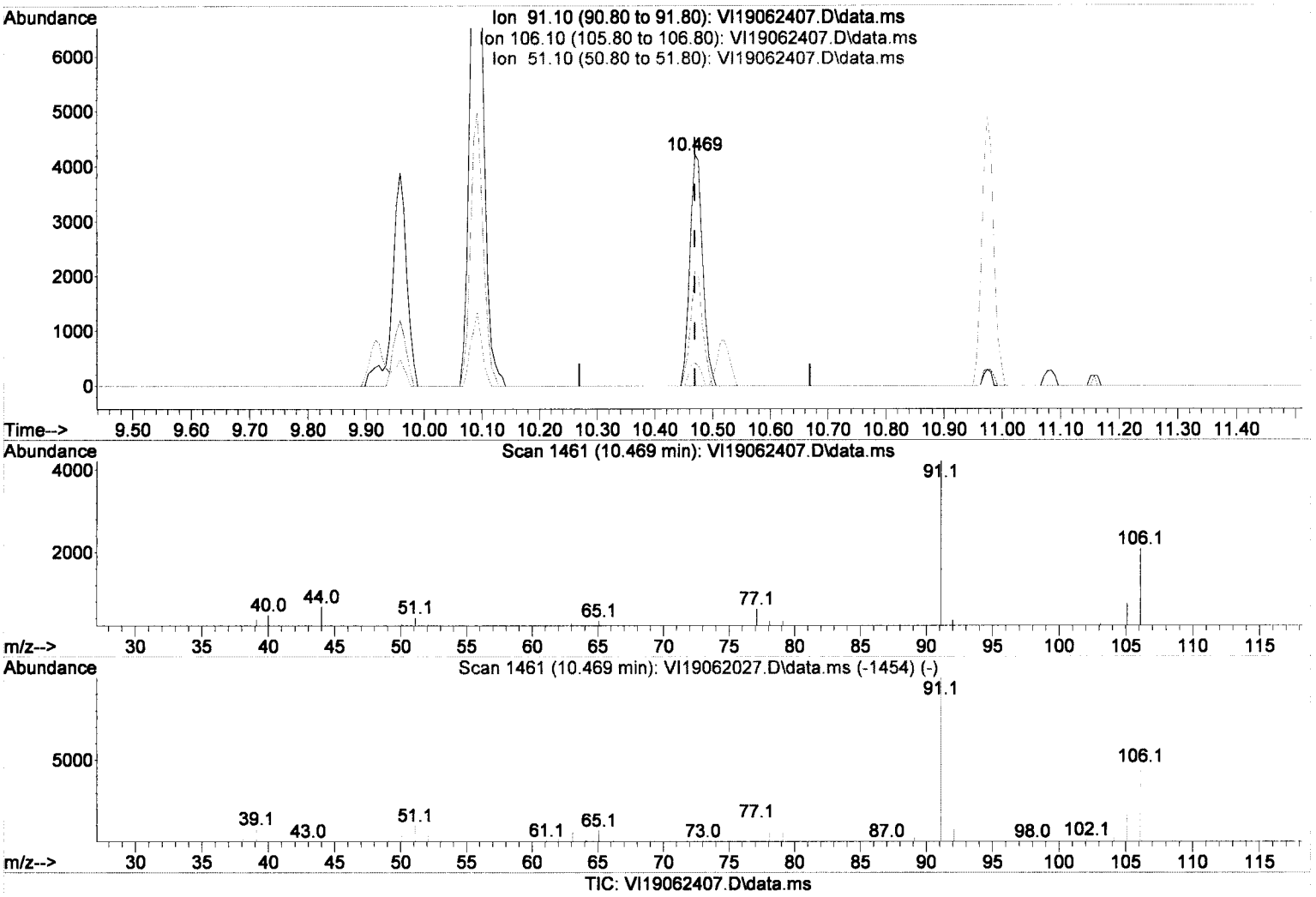
response 15832

Ion	Exp%	Act%
91.10	100.00	100.00
106.10	51.20	50.68
51.10	9.80	13.59
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062407.D
Acq On : 24 Jun 2019 11:15 am
Operator : TNL
Sample : A9F0692-02@100
Misc : 100X 500uL/50mL 8260C
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 14:22:00 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



TIC: VI19062407.D\data.ms

(62) o-Xylene

10.469min (+ 0.000) 1.10 ug/L

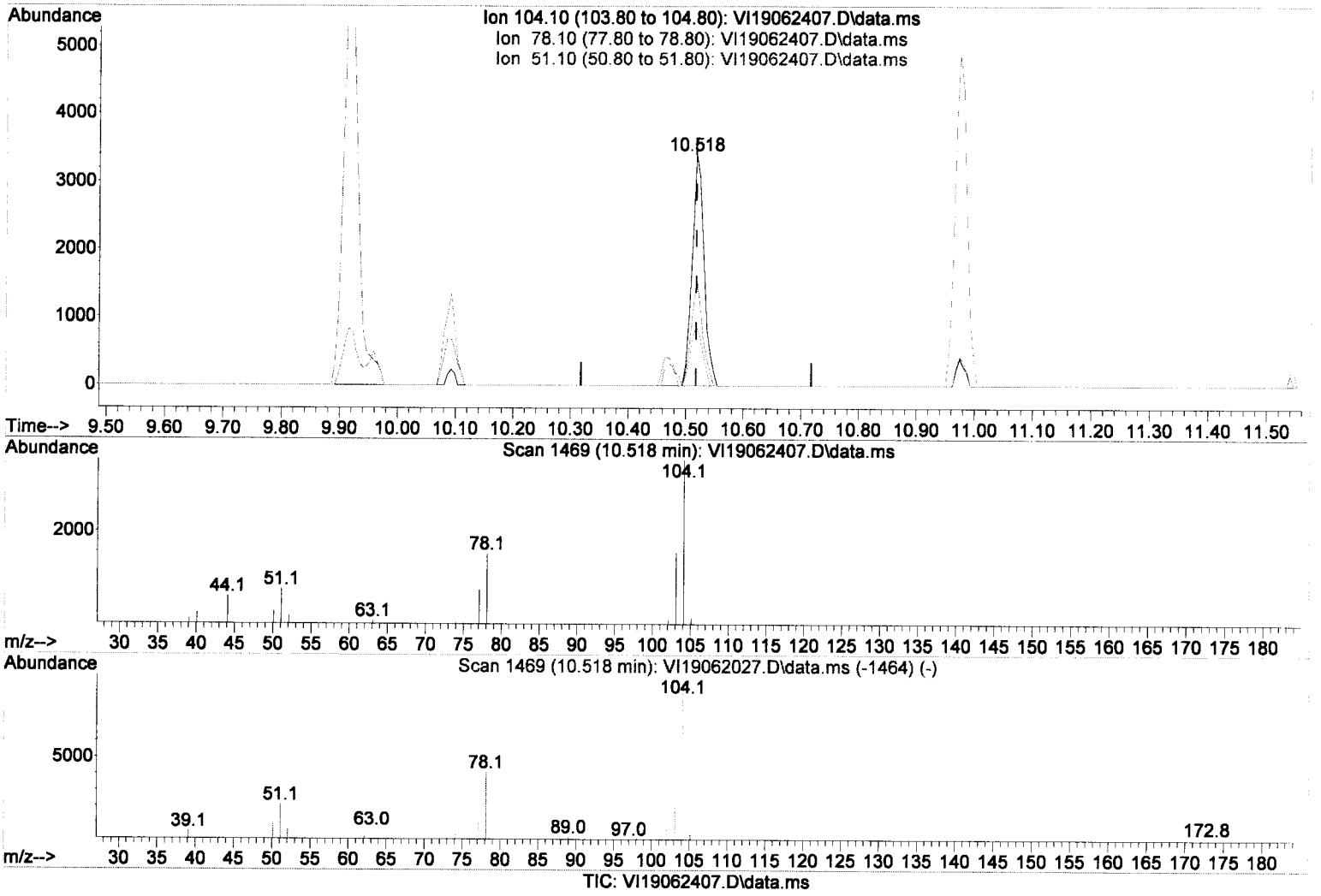
response 6570

Ion	Exp%	Act%
91.10	100.00	100.00
106.10	48.30	49.64
51.10	10.20	9.85
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062407.D
Acq On : 24 Jun 2019 11:15 am
Operator : TNL
Sample : A9F0692-02@100
Misc : 100X 500uL/50mL 8260C
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 14:22:00 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



TIC: VI19062407.D\data.ms

(63) Styrene

10.518min (-0.000) 1.08 ug/L

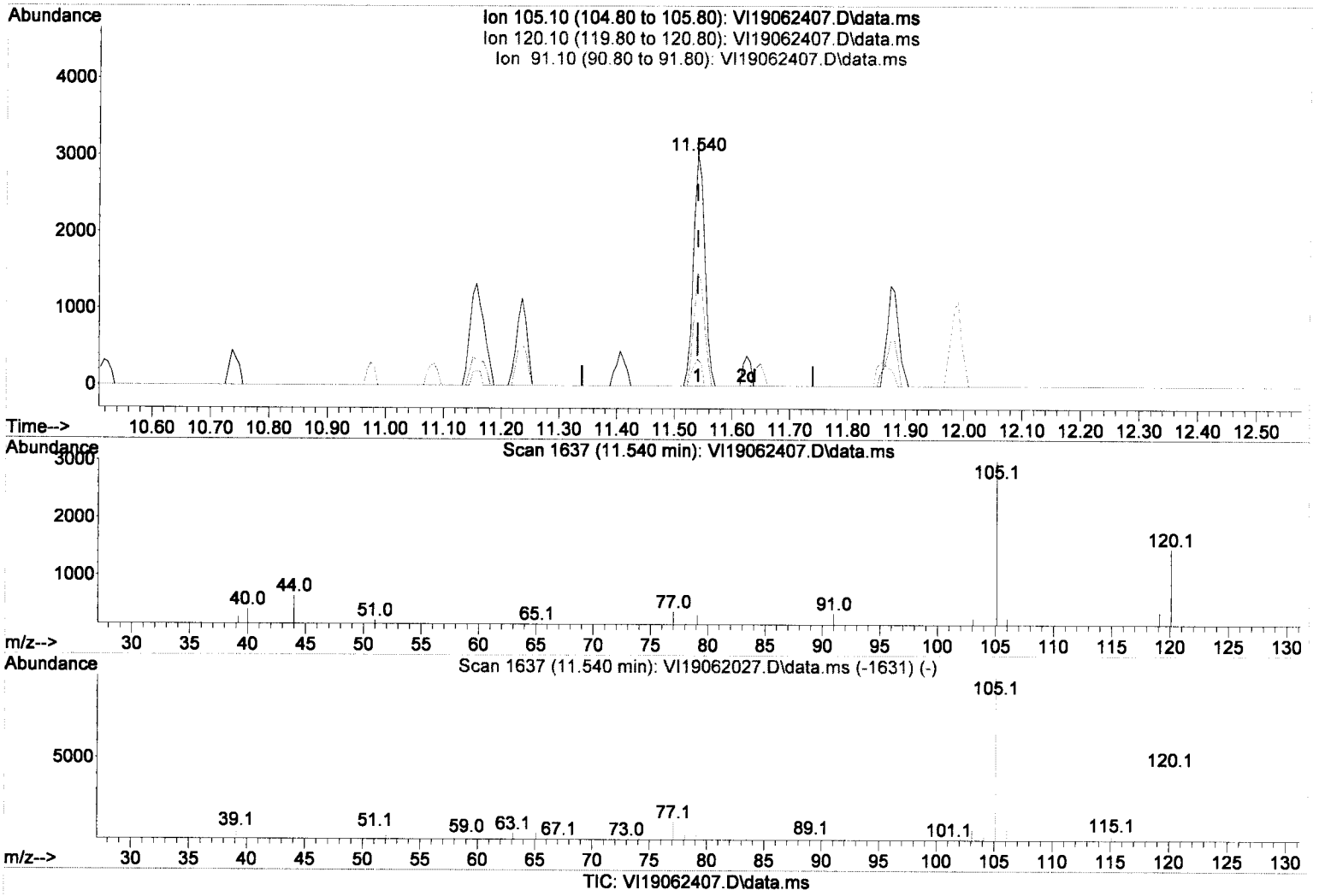
response 4929

Ion	Exp%	Act%
104.10	100.00	100.00
78.10	39.40	45.99
51.10	22.20	25.46
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062407.D
Acq On : 24 Jun 2019 11:15 am
Operator : TNL
Sample : A9F0692-02@100
Misc : 100X 500uL/50mL 8260C
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 14:22:00 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



TIC: VI19062407.D\data.ms

(77) 1,2,4-Trimethylbenzene

11.540min (-0.000) 0.75 ug/L

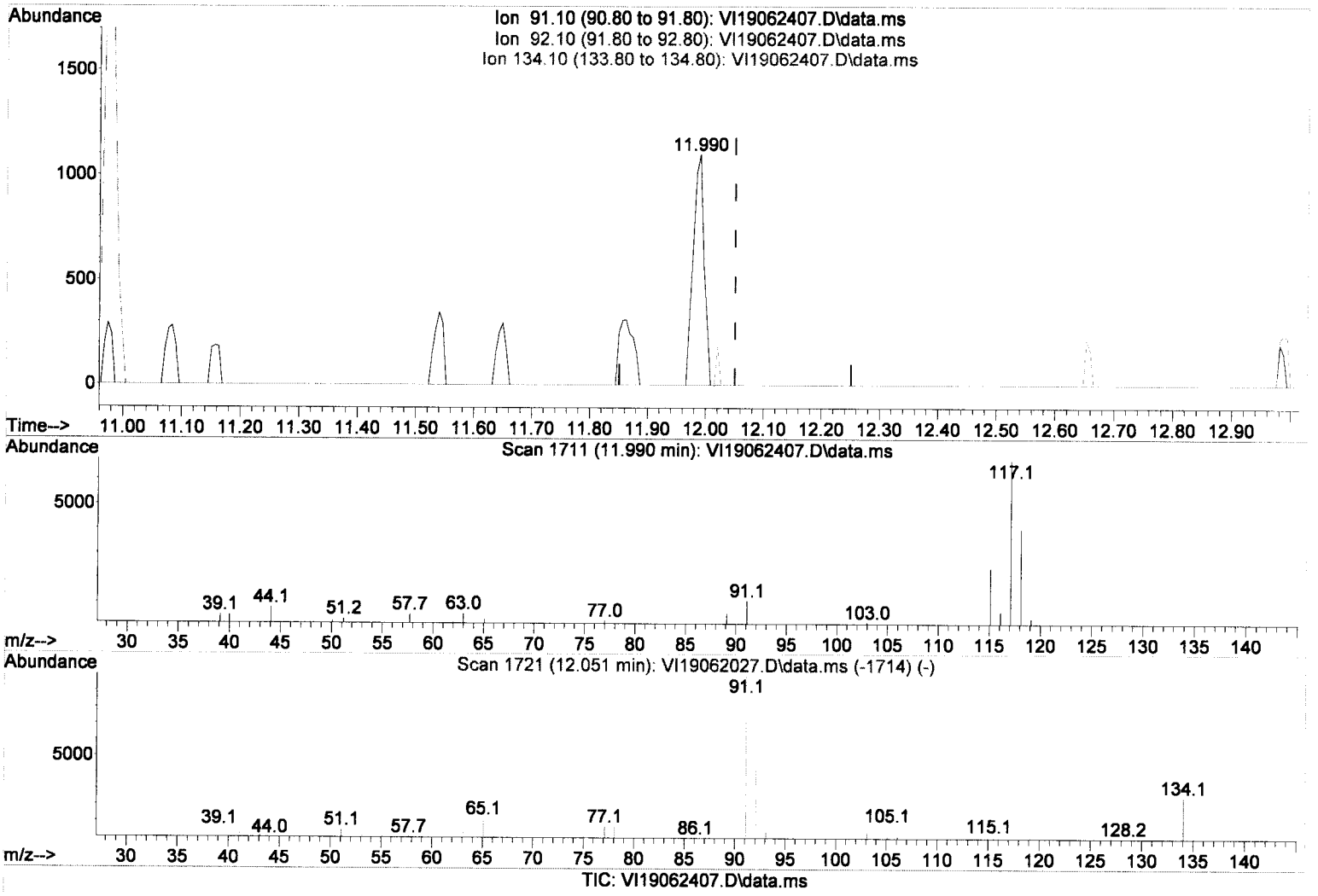
response 4066

Ion	Exp%	Act%
105.10	100.00	100.00
120.10	49.80	48.87
91.10	10.50	11.50
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062407.D
Acq On : 24 Jun 2019 11:15 am
Operator : TNL
Sample : A9F0692-02@100
Misc : 100X 500uL/50mL 8260C
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 14:22:00 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



TIC: VI19062407.D\data.ms

(82) n-Butylbenzene

11.990min (-0.061) 0.30 ug/L

response 1456

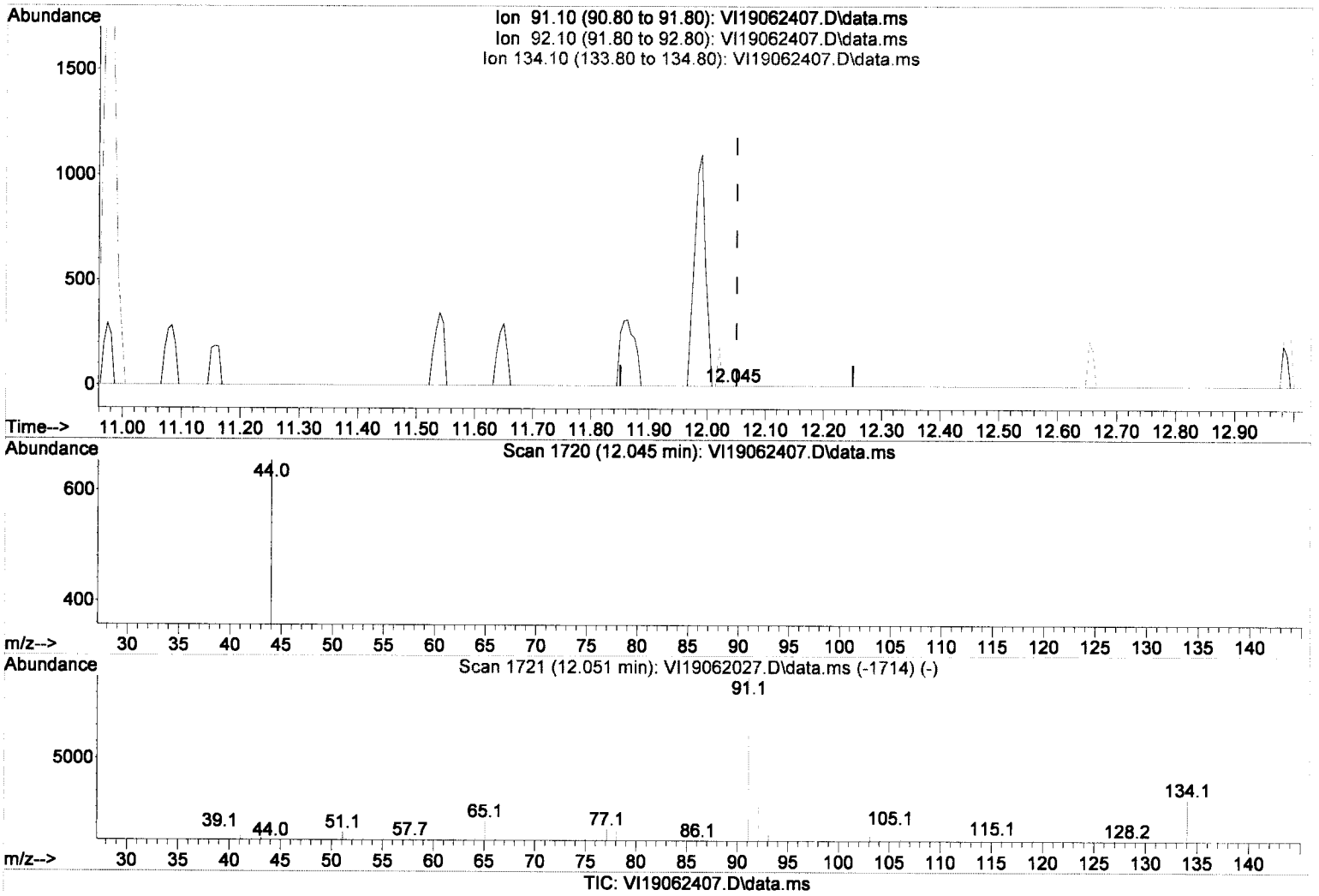
Ion	Exp%	Act%
91.10	100.00	100.00
92.10	55.90	0.00#
134.10	28.20	0.00
0.00	0.00	0.00

MD 6/24/19

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062407.D
Acq On : 24 Jun 2019 11:15 am
Operator : TNL
Sample : A9F0692-02@100
Misc : 100X 500uL/50mL 8260C
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 14:22:00 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



TIC: VI19062407.D\data.ms

(82) n-Butylbenzene

12.045min (-0.006) 0.00 ug/L m

response 0

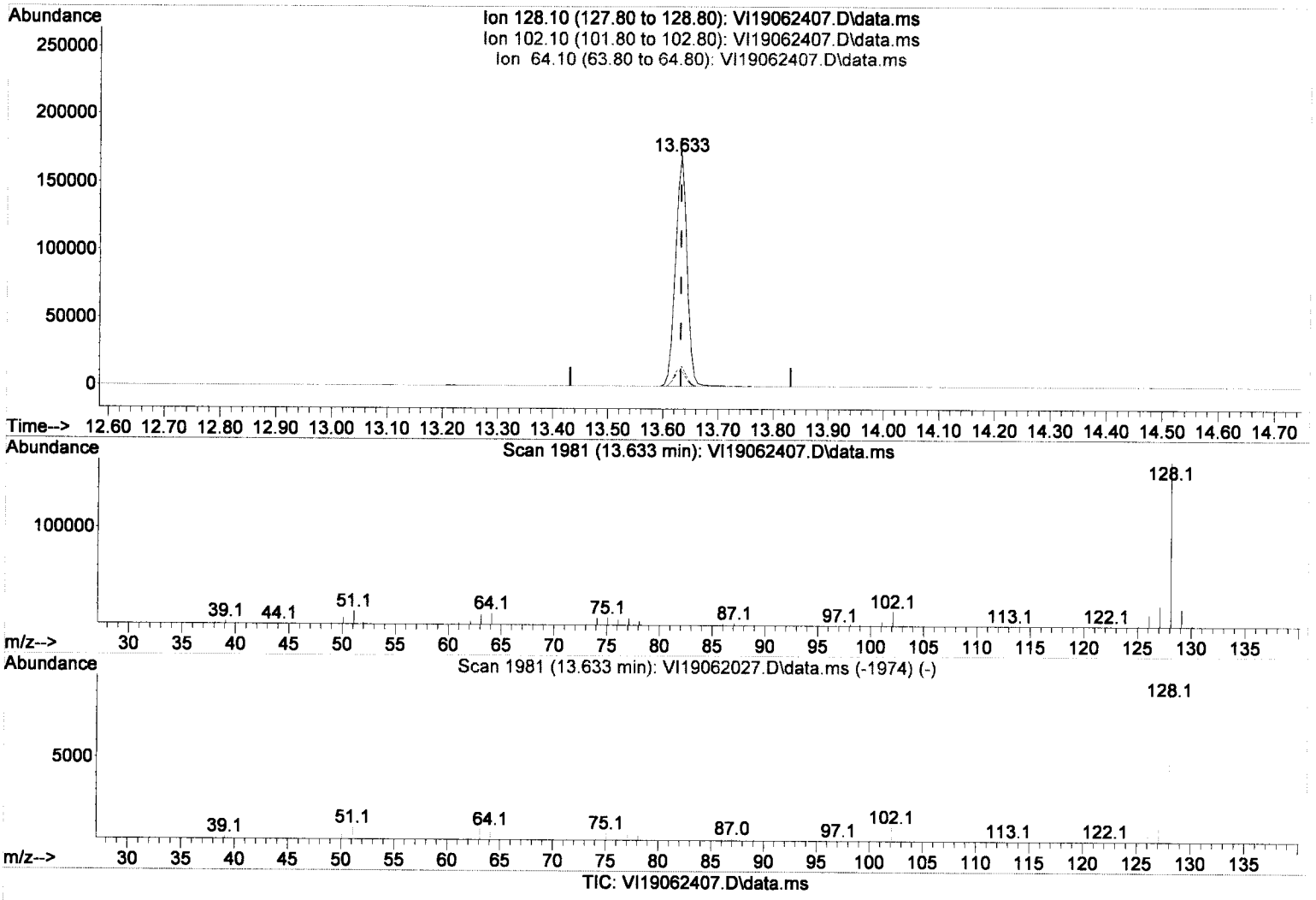
Ion	Exp%	Act%
91.10	100.00	0.00
92.10	55.90	0.00#
134.10	28.20	0.00
0.00	0.00	0.00

0 NL 6/24/19 hw

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062407.D
Acq On : 24 Jun 2019 11:15 am
Operator : TNL
Sample : A9F0692-02@100
Misc : 100X 500uL/50mL 8260C
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 14:22:00 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



(87) Naphthalene

13.633min (+ 0.001) 43.24 ug/L

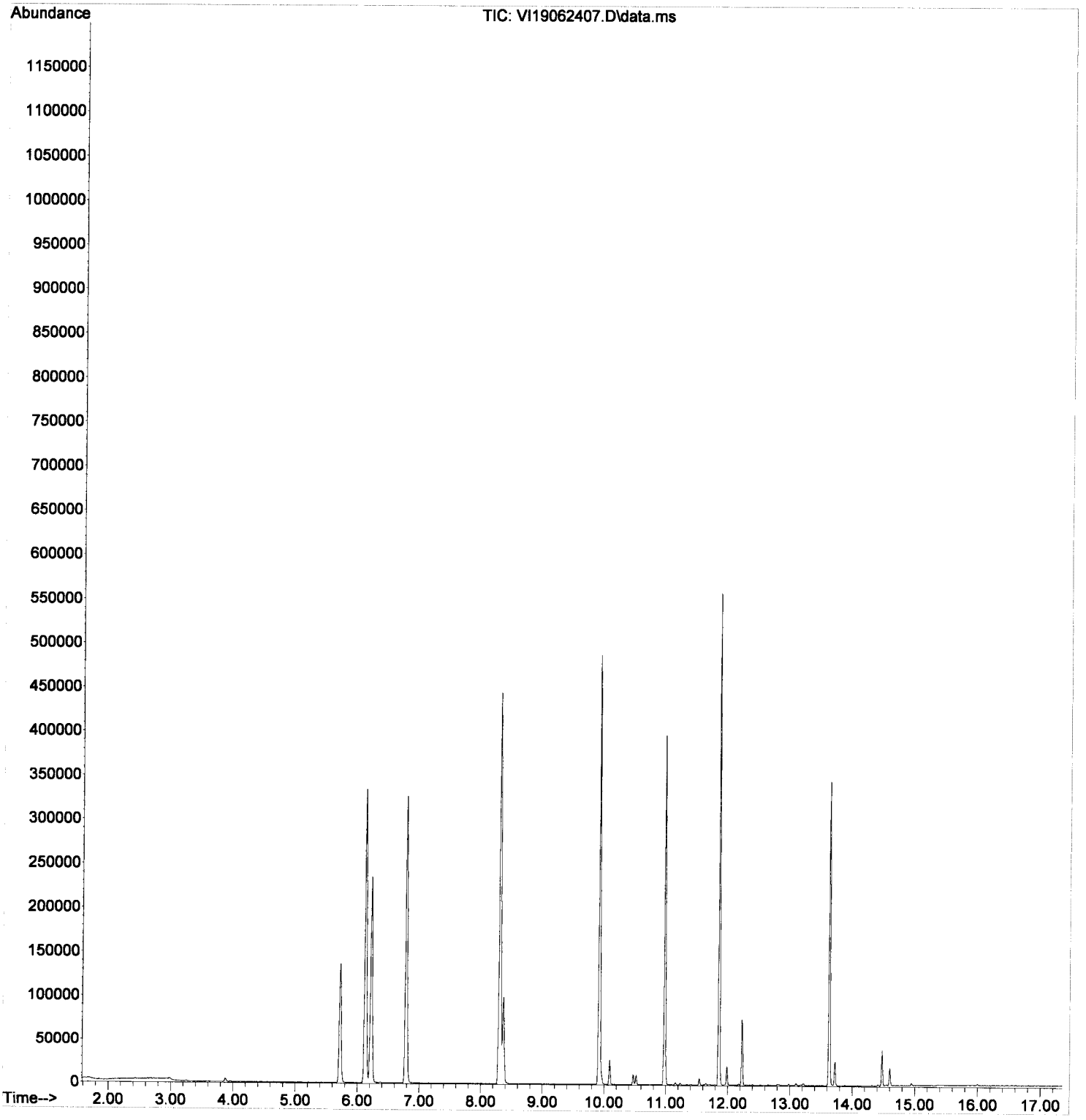
response 249625

Ion	Exp%	Act%
128.10	100.00	100.00
102.10	7.60	8.78
64.10	4.70	6.98
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062407.D
Acq On : 24 Jun 2019 11:15 am
Operator : TNL
Sample : A9F0692-02@100
Misc : 100X 500uL/50mL 8260C
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 14:22:00 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062408.D
Acq On : 24 Jun 2019 11:42 am
Operator : TNL
Sample : A9F0692-03@100
Misc : 100X 500uL/50mL 8260C
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 14:22:04 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.223	168	168891	50.00 ug/L		0.00
45) Chlorobenzene-d5 (I)	9.916	117	252464	50.00 ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	11.856	152	112024	50.00 ug/L		0.00
System Monitoring Compounds						
32) Dibromofluoromethane (S)	5.718	111	92131	50.60 ug/L		0.00
39) 1,4-Difluorobenzene (S)	6.789	114	285025	50.70 ug/L		0.00
48) Toluene-d8 (S)	8.304	98	334133	50.65 ug/L		0.00
67) 4-Bromofluorobenzene (S)	10.980	174	93752	50.51 ug/L		0.00
Target Compounds						Qvalue
3) Chloromethane	1.898	50	230	0.10 ug/L	#	47
6) Chloroethane	2.512	64	116	0.16 ug/L	#	36
14) Methylene Chloride	3.881	84	1836	Below Cal		91
15) Acetone	3.942	43	422	0.51 ug/L	#	44
35) Benzene	6.126	78	36042	5.12 ug/L		96
49) Toluene	8.364	91	9605	1.33 ug/L		98
59) Ethylbenzene	9.958	91	1760	0.23 ug/L		91
61) m,p-Xylenes (2)	10.092	91	2512	0.44 ug/L		91
62) o-Xylene	10.475	91	994	0.17 ug/L		92
63) Styrene	10.518	104	542	0.12 ug/L		89
77) 1,2,4-Trimethylbenzene	11.540	105	706	0.14 ug/L		78
78) sec-Butylbenzene	11.540	105	706	0.11 ug/L		59
82) n-Butylbenzene	11.984	91	732	0.16 ug/L	#	31
87) Naphthalene	13.633	128	58578	10.70 ug/L		94

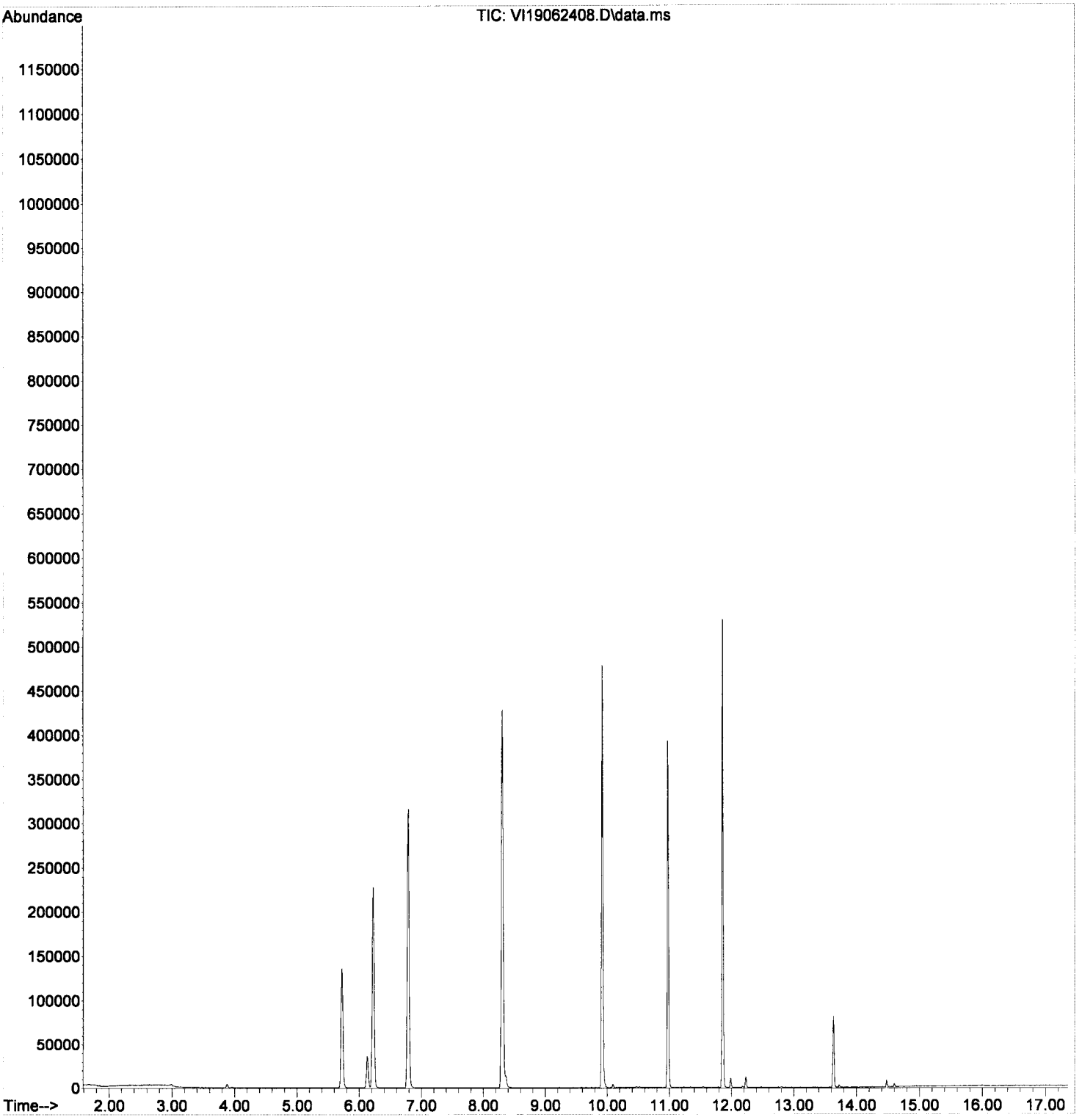
(#) = qualifier out of range (m) = manual integration (+) = signals summed

PB01
6/24/19 tm1

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062408.D
Acq On : 24 Jun 2019 11:42 am
Operator : TNL
Sample : A9F0692-03@100
Misc : 100X 500uL/50mL 8260C
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 14:22:04 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062416.D
Acq On : 24 Jun 2019 3:19 pm
Operator : TNL
Sample : 9061200-DUP1
Misc : 1X 5mL A9F0709-01
ALS Vial : 16 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 16:15:36 2019
Quant Method : C:\msdchem\1\methods\VI190621G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Jun 21 11:04:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.223	168	160904	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.789	114	271545	50.18	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.980	174	91420	48.60	ug/L	0.00
9) Toluene-d8 (NR)	8.303	98	319433	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.916	117	243046	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.856	150	168341	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.890	TIC	-9058m	23.47	ug/L	
5) TPHg (C5-C9)	9.890	TIC	295783m	18.05	ug/L	
6) TPHg (C6-C10)	9.890	TIC	241823m	16.90	ug/L	
7) CA-LUFT (C5-C12)	9.890	TIC	327478m	21.26	ug/L	

6/24/19 tnl

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062416.D
Acq On : 24 Jun 2019 3:19 pm
Operator : TNL
Sample : 9061200-DUP1
Misc : 1X 5mL A9F0709-01
ALS Vial : 16 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 16:10:46 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Pentafluorobenzene (I)	6.223	168	160904	50.00 ug/L	0.00
45) Chlorobenzene-d5 (I)	9.916	117	243046	50.00 ug/L	0.00
66) 1,4-Dichlorobenzene-d4...	11.856	152	108513	50.00 ug/L	0.00
System Monitoring Compounds					
32) Dibromofluoromethane (S)	5.724	111	88138	50.81 ug/L	0.00
39) 1,4-Difluorobenzene (S)	6.789	114	271545	50.70 ug/L	0.00
48) Toluene-d8 (S)	8.303	98	319077	50.25 ug/L	0.00
67) 4-Bromofluorobenzene (S)	10.980	174	91420	50.85 ug/L	0.00
Target Compounds					Qvalue
3) Chloromethane	1.904	50	453	0.21 ug/L #	47
6) Chloroethane	2.500	64	705	1.04 ug/L #	36
9) 1,1-Dichloroethene	3.248	61	361	0.17 ug/L #	70
14) Methylene Chloride	3.887	84	652	Below Cal	94
15) Acetone	3.954	43	6164	7.87 ug/L	94
21) 1,1-Dichloroethane	4.696	63	4161	1.49 ug/L	95

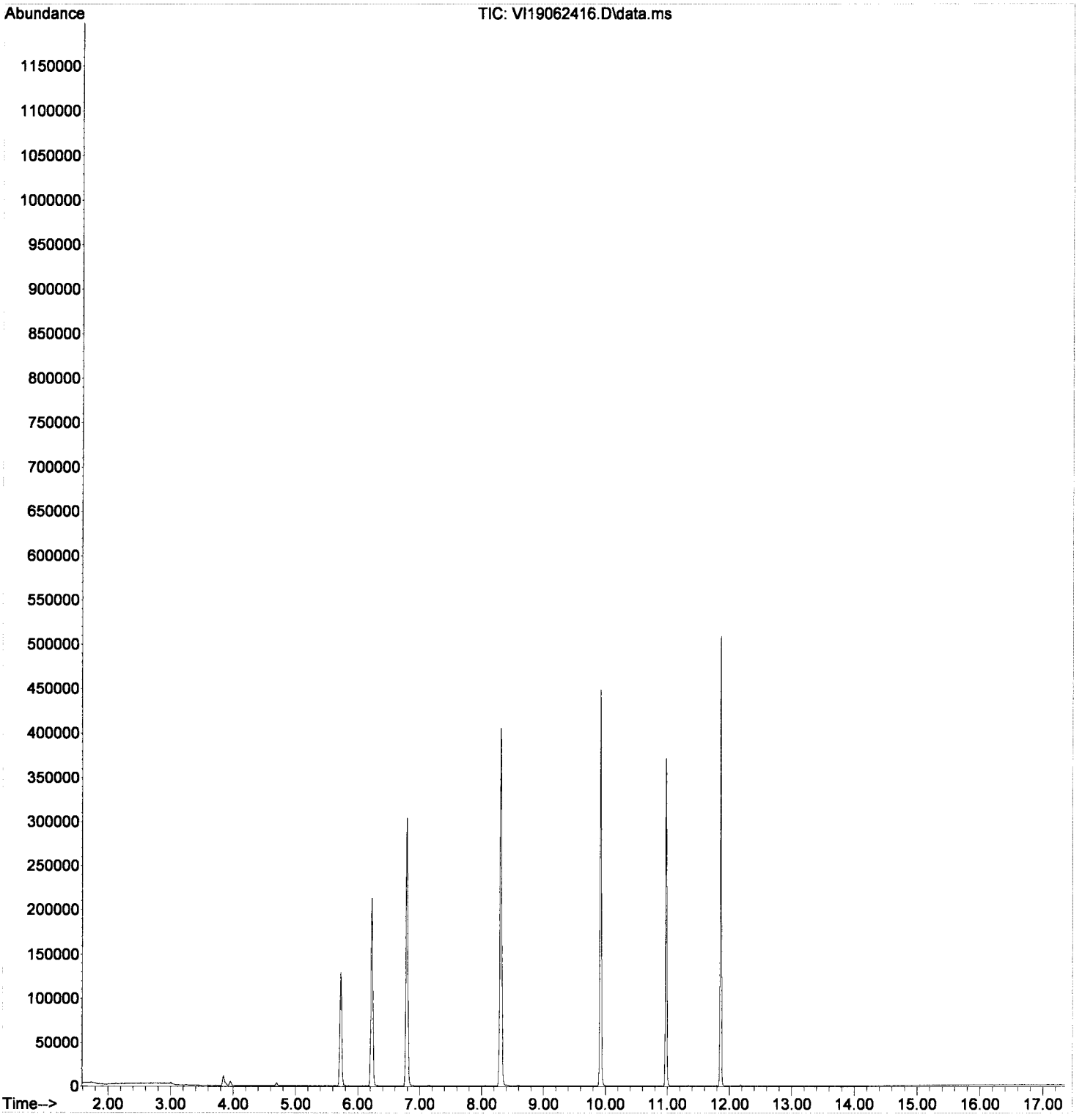
6/24/19 bm

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062416.D
Acq On : 24 Jun 2019 3:19 pm
Operator : TNL
Sample : 9061200-DUP1
Misc : 1X 5mL A9F0709-01
ALS Vial : 16 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 24 16:10:46 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062425.D
Acq On : 24 Jun 2019 7:22 pm
Operator : TNL
Sample : A9F0692-03RE1@10
Misc : 10X 5mL/50mL 8260C RR-01
ALS Vial : 25 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 25 07:31:55 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Pentafluorobenzene (I)	6.223	168	150858	50.00 ug/L	0.00
45) Chlorobenzene-d5 (I)	9.916	117	226275	50.00 ug/L	0.00
66) 1,4-Dichlorobenzene-d4...	11.856	152	105684	50.00 ug/L	0.00
System Monitoring Compounds					
32) Dibromofluoromethane (S)	5.718	111	83055	51.07 ug/L	0.00
39) 1,4-Difluorobenzene (S)	6.789	114	253964	50.58 ug/L	0.00
48) Toluene-d8 (S)	8.303	98	298389	50.47 ug/L	0.00
67) 4-Bromofluorobenzene (S)	10.980	174	85048	48.57 ug/L	0.00
Target Compounds					Qvalue
6) Chloroethane	2.506	64	634	1.00 ug/L	36
10) Carbon Disulfide	3.254	76	427	0.12 ug/L	78
14) Methylene Chloride	3.875	84	1765	Below Cal	97
15) Acetone	3.948	43	7836	10.67 ug/L	99
35) Benzene	6.126	78	283611	45.07 ug/L	98
49) Toluene	8.364	91	81844	12.68 ug/L	98
59) Ethylbenzene	9.958	91	15277	2.26 ug/L	99
61) m,p-Xylenes (2)	10.092	91	23190	4.55 ug/L	95
62) o-Xylene	10.469	91	9429	1.82 ug/L	94
63) Styrene	10.518	104	5807	1.46 ug/L	90
65) Isopropylbenzene	10.737	105	1037	0.17 ug/L	84
72) 1,3,5-Trimethylbenzene	11.236	105	2490	0.51 ug/L	97
76) tert-Butylbenzene	11.540	91	596	0.21 ug/L	52
77) 1,2,4-Trimethylbenzene	11.540	105	6184	1.27 ug/L	92
78) sec-Butylbenzene	11.625	105	565	0.09 ug/L	58
82) n-Butylbenzene	11.984	91	7692	1.76 ug/L #	42
87) Naphthalene	13.633	128	682143	132.05 ug/L	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

6/25/19 MK

ME 2.19 ppb ✓

ME ND

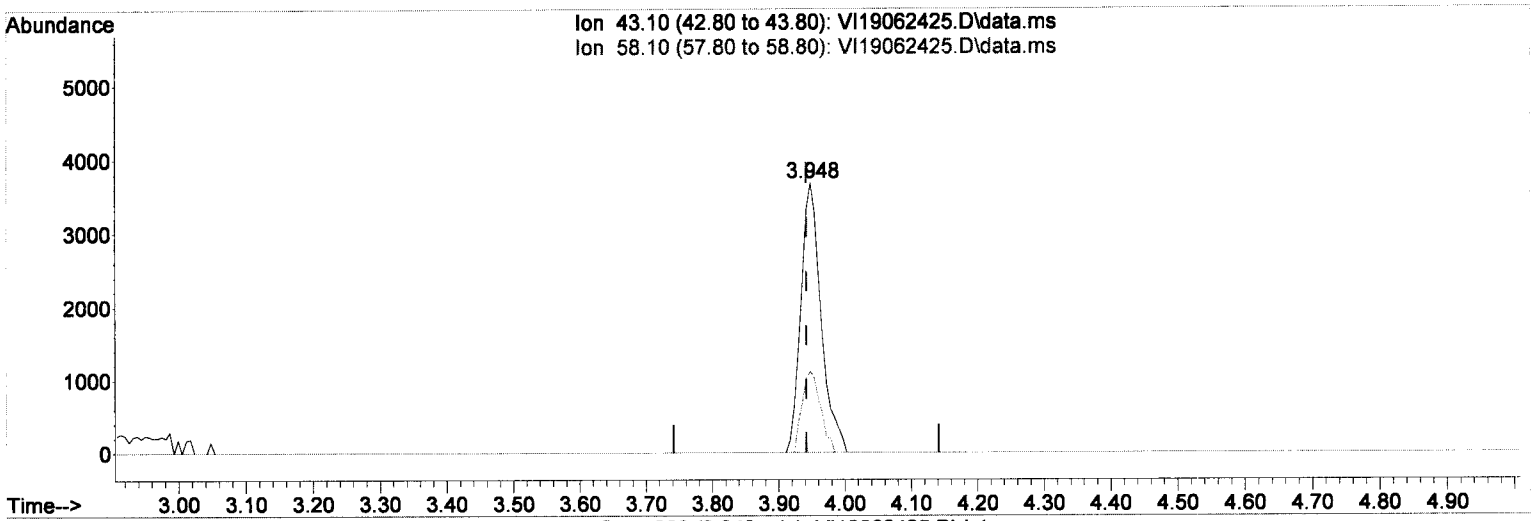
ME ND

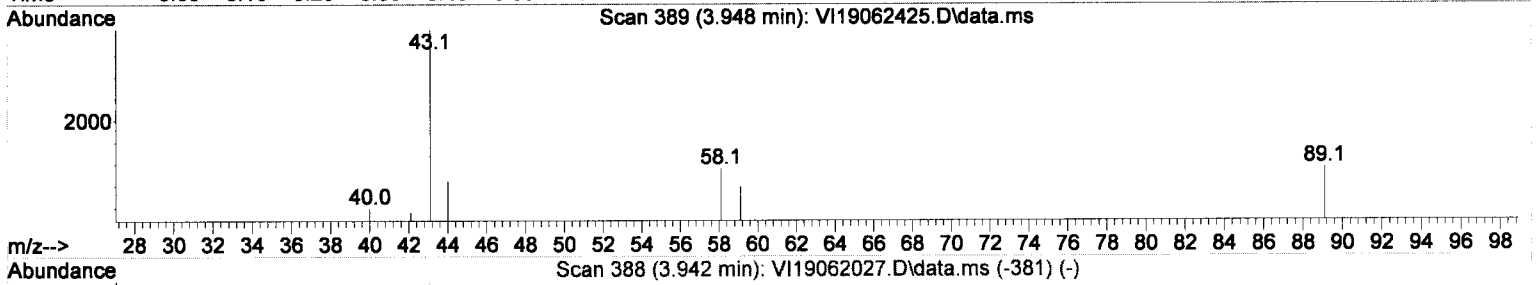
Matched 100X —

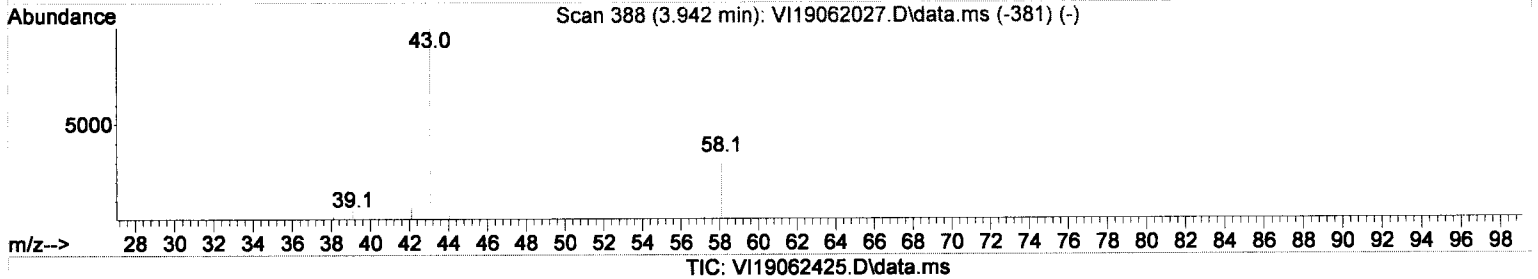
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062425.D
Acq On : 24 Jun 2019 7:22 pm
Operator : TNL
Sample : A9F0692-03RE1@10
Misc : 10X 5mL/50mL 8260C RR-01
ALS Vial : 25 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 25 07:31:55 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration







TIC: VI19062425.D\data.ms

(15) Acetone

3.948min (+ 0.006) 10.67 ug/L

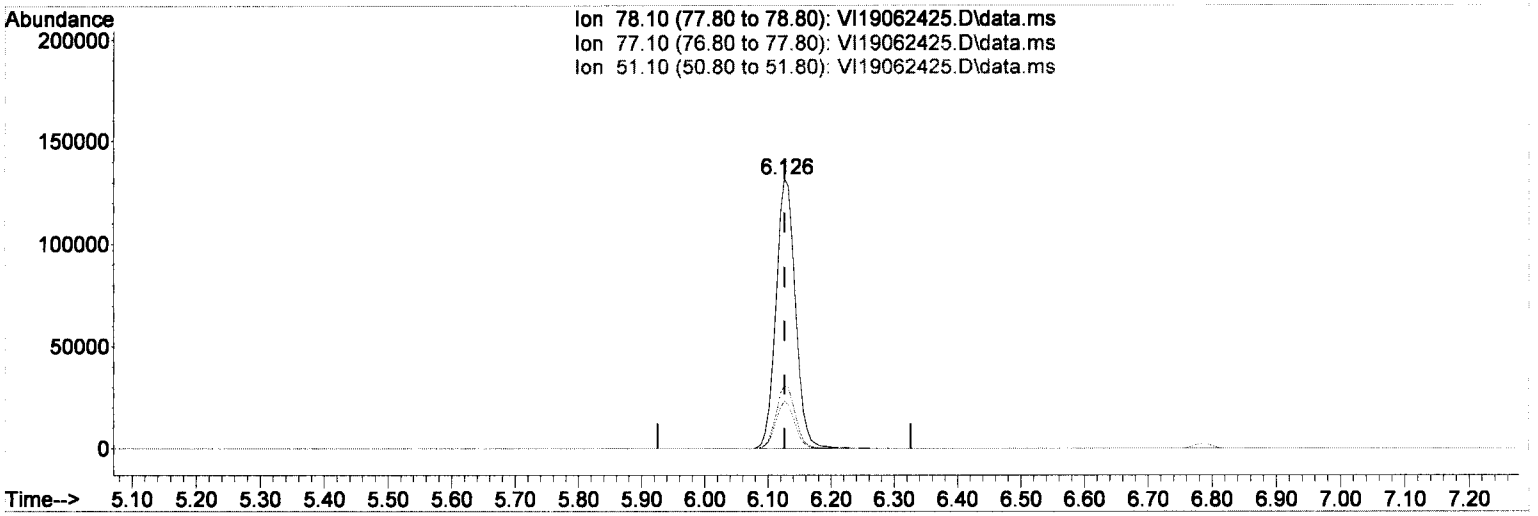
response 7836

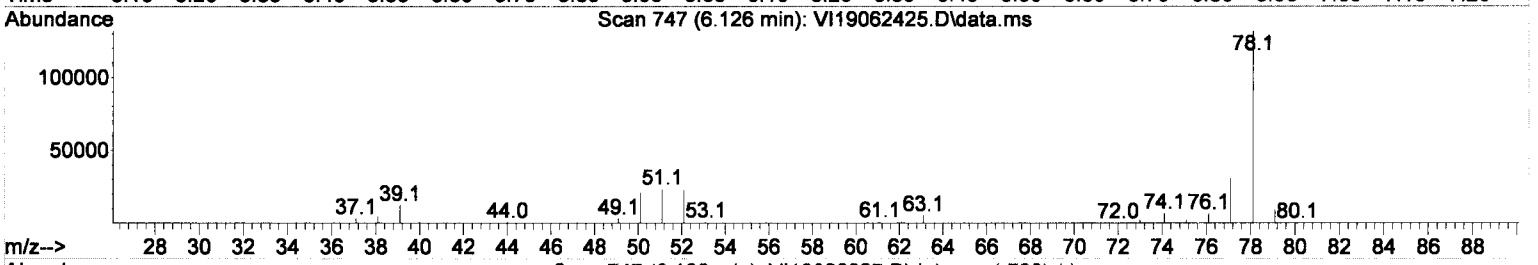
Ion	Exp%	Act%
43.10	100.00	100.00
58.10	30.80	30.28
0.00	0.00	0.00
0.00	0.00	0.00

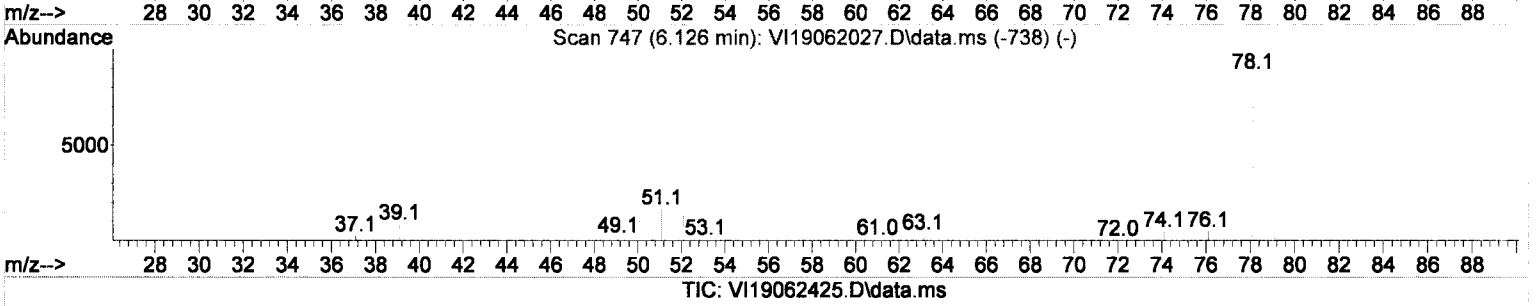
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062425.D
Acq On : 24 Jun 2019 7:22 pm
Operator : TNL
Sample : A9F0692-03RE1@10
Misc : 10X 5mL/50mL 8260C RR-01
ALS Vial : 25 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 25 07:31:55 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration







TIC: VI19062425.D\data.ms

(35) Benzene

6.126min (-0.000) 45.07 ug/L

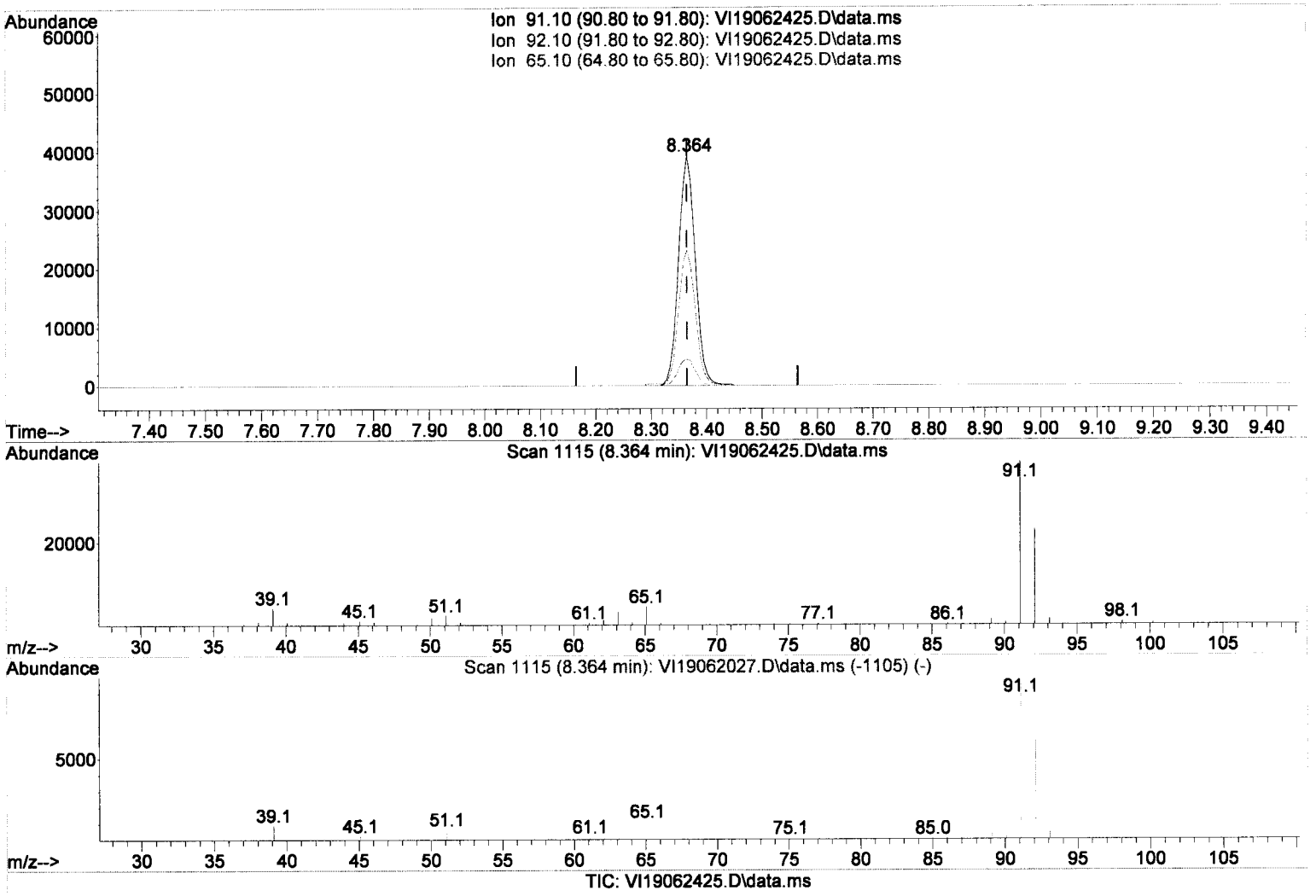
response 283611

Ion	Exp%	Act%
78.10	100.00	100.00
77.10	24.70	23.40
51.10	17.20	17.68
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062425.D
Acq On : 24 Jun 2019 7:22 pm
Operator : TNL
Sample : A9F0692-03RE1@10
Misc : 10X 5mL/50mL 8260C RR-01
ALS Vial : 25 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 25 07:31:55 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



TIC: VI19062425.D\data.ms

(49) Toluene (C)

8.364min (-0.000) 12.68 ug/L

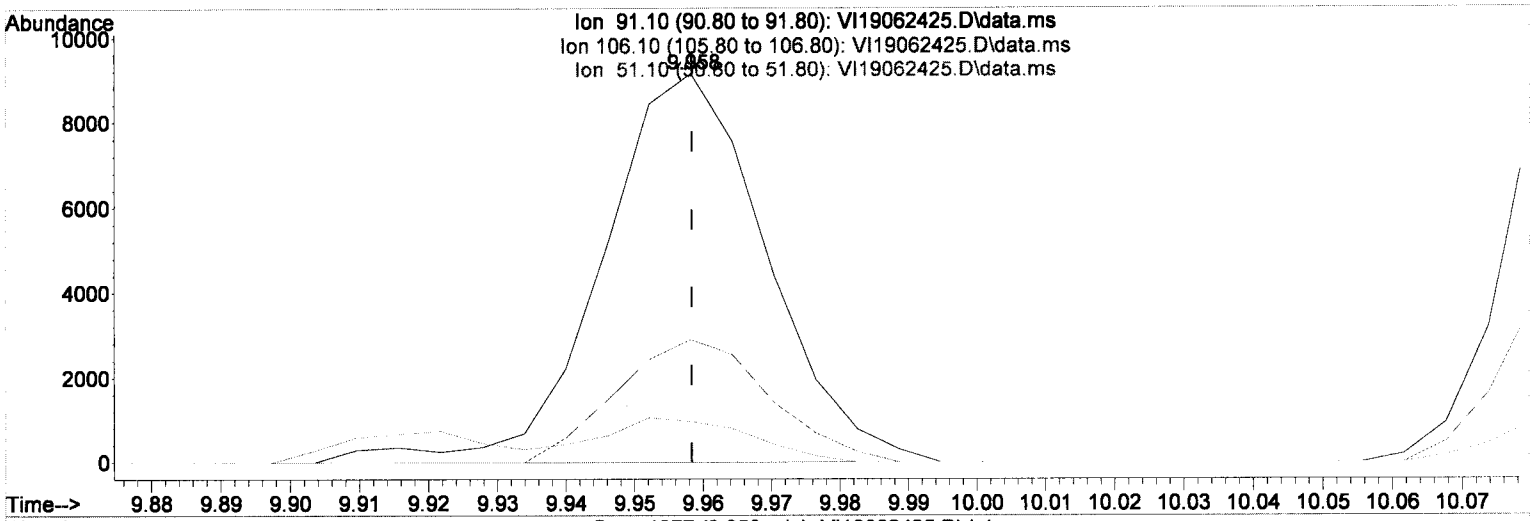
response 81844

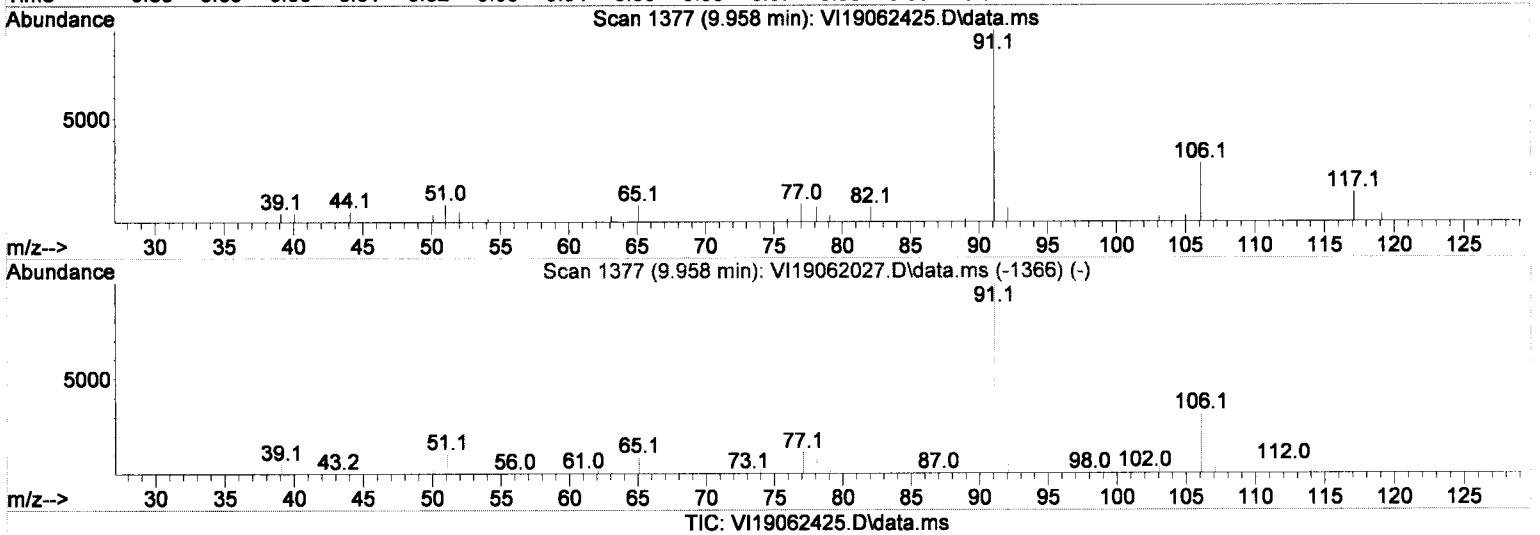
Ion	Exp%	Act%
91.10	100.00	100.00
92.10	59.80	58.61
65.10	10.30	11.40
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062425.D
Acq On : 24 Jun 2019 7:22 pm
Operator : TNL
Sample : A9F0692-03RE1@10
Misc : 10X 5mL/50mL 8260C RR-01
ALS Vial : 25 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 25 07:31:55 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration





TIC: VI19062425.D\data.ms

(59) Ethylbenzene (C)

9.958min (-0.000) 2.26 ug/L

response 15277

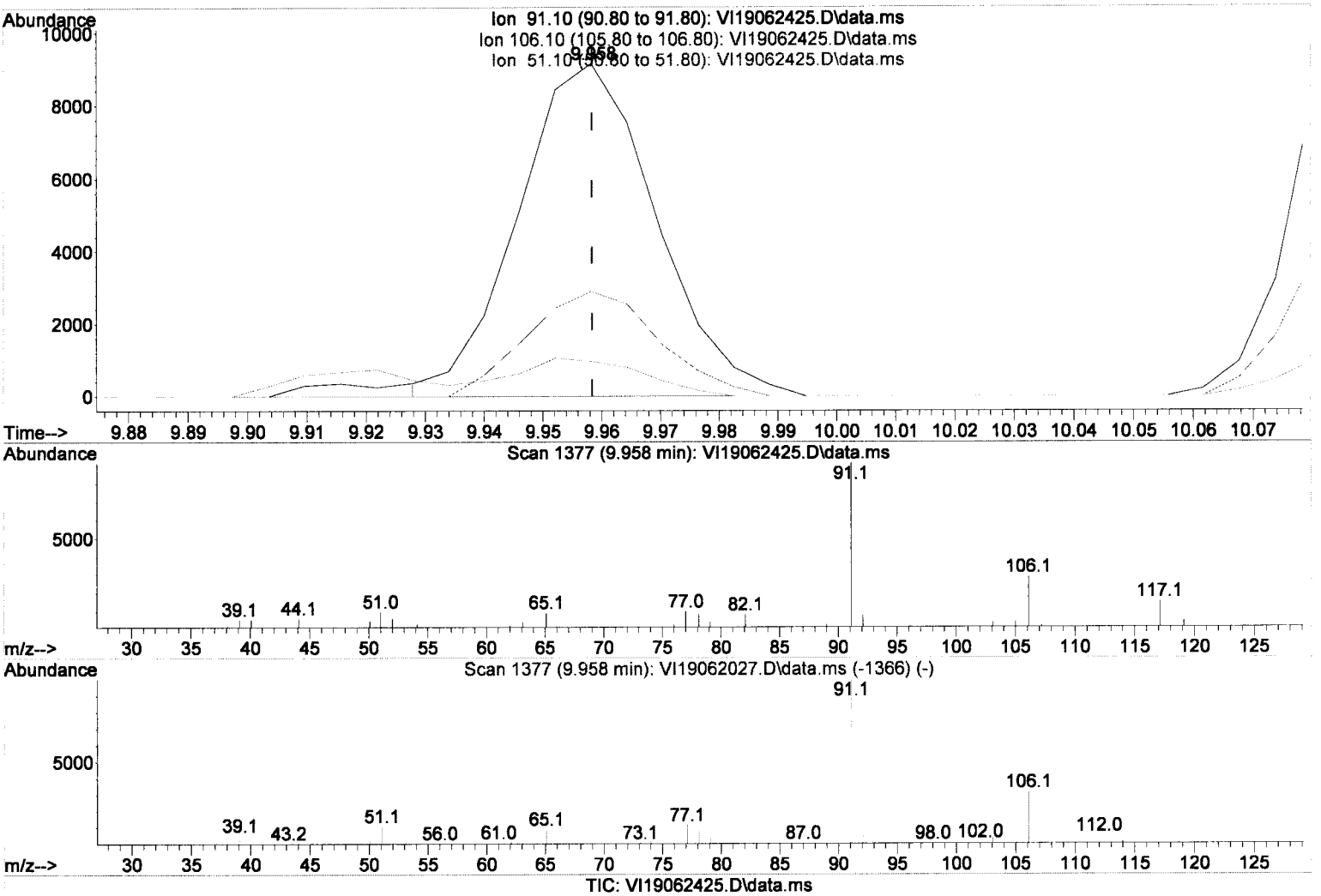
Ion	Exp%	Act%
91.10	100.00	100.00
106.10	30.80	31.60
51.10	10.40	10.56
0.00	0.00	0.00

(MC) 6/25/19 tm

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062425.D
Acq On : 24 Jun 2019 7:22 pm
Operator : TNL
Sample : A9F0692-03RE1@10
Misc : 10X 5mL/50mL 8260C RR-01
ALS Vial : 25 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 25 07:31:55 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



TIC: VI19062425.D\data.ms

(59) Ethylbenzene (C)

9.958min (-0.000) 2.19 ug/L m

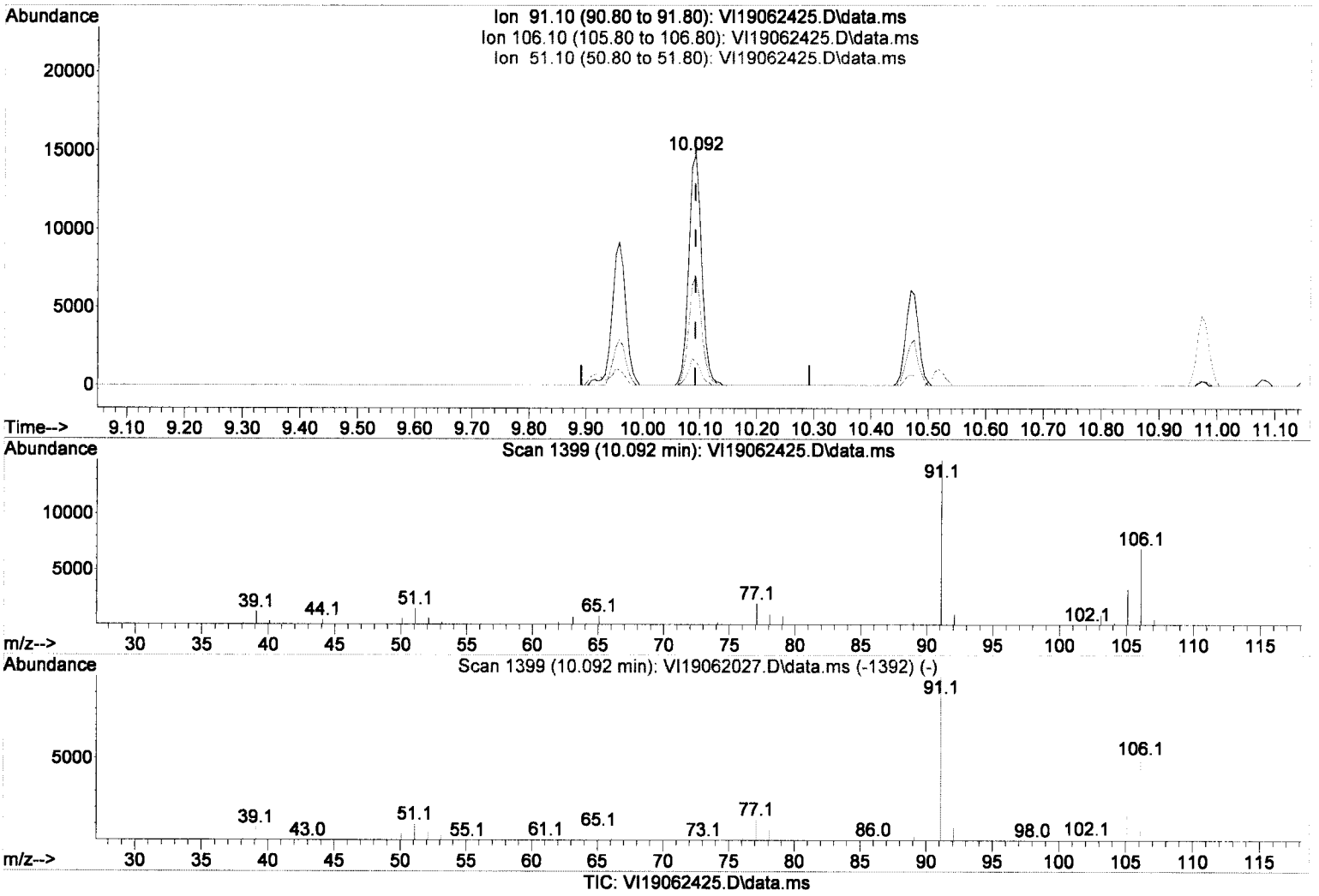
response 14816

Ion	Exp%	Act%
91.10	100.00	100.00
106.10	30.80	31.60
51.10	10.40	10.56
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062425.D
Acq On : 24 Jun 2019 7:22 pm
Operator : TNL
Sample : A9F0692-03RE1@10
Misc : 10X 5mL/50mL 8260C RR-01
ALS Vial : 25 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 25 07:31:55 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



TIC: VI19062425.D\data.ms

(61) m,p-Xylenes (2)

10.092min (+ 0.000) 4.55 ug/L

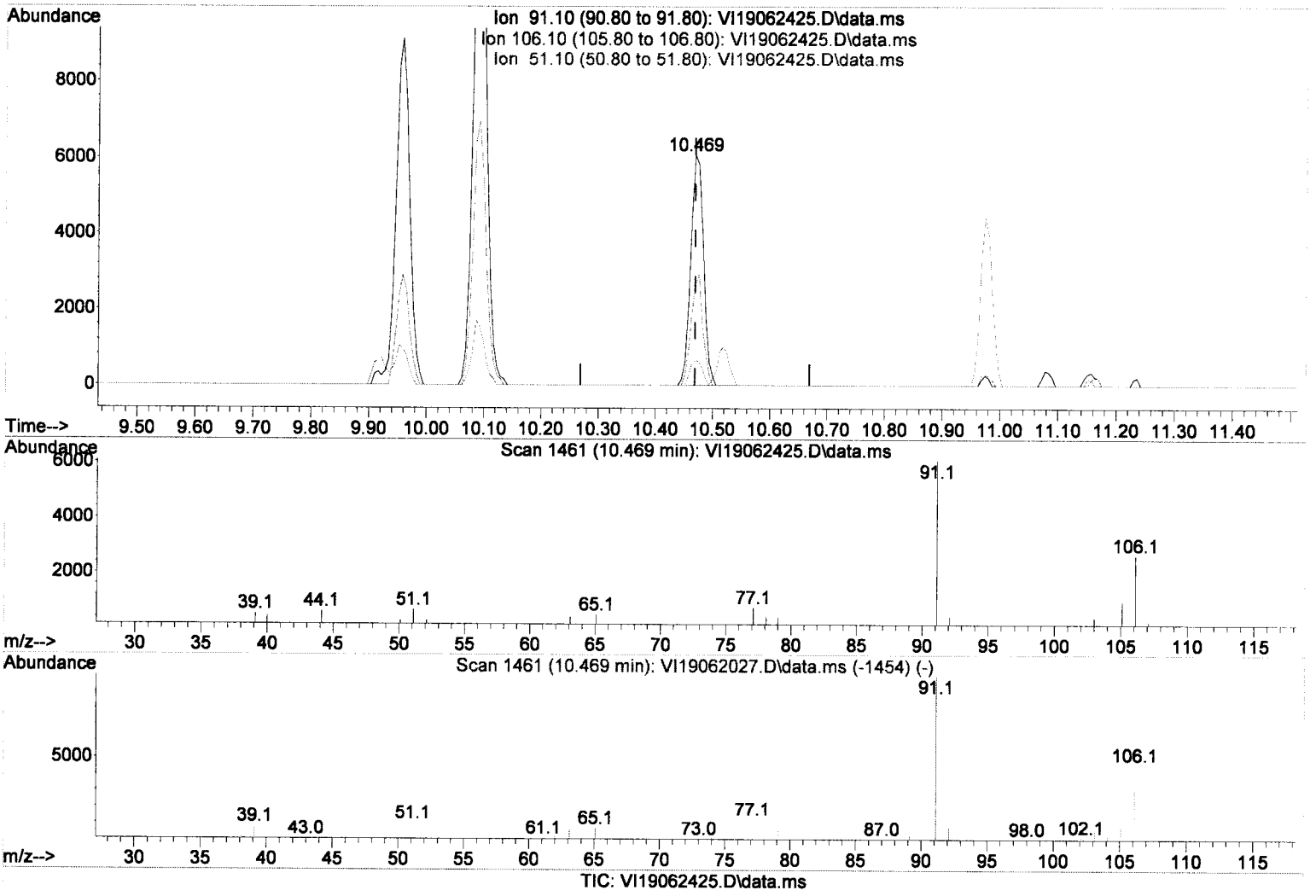
response 23190

Ion	Exp%	Act%
91.10	100.00	100.00
106.10	51.20	47.07
51.10	9.80	10.50
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062425.D
Acq On : 24 Jun 2019 7:22 pm
Operator : TNL
Sample : A9F0692-03RE1@10
Misc : 10X 5mL/50mL 8260C RR-01
ALS Vial : 25 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 25 07:31:55 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



TIC: VI19062425.D\data.ms

(62) o-Xylene

10.469min (+ 0.000) 1.82 ug/L

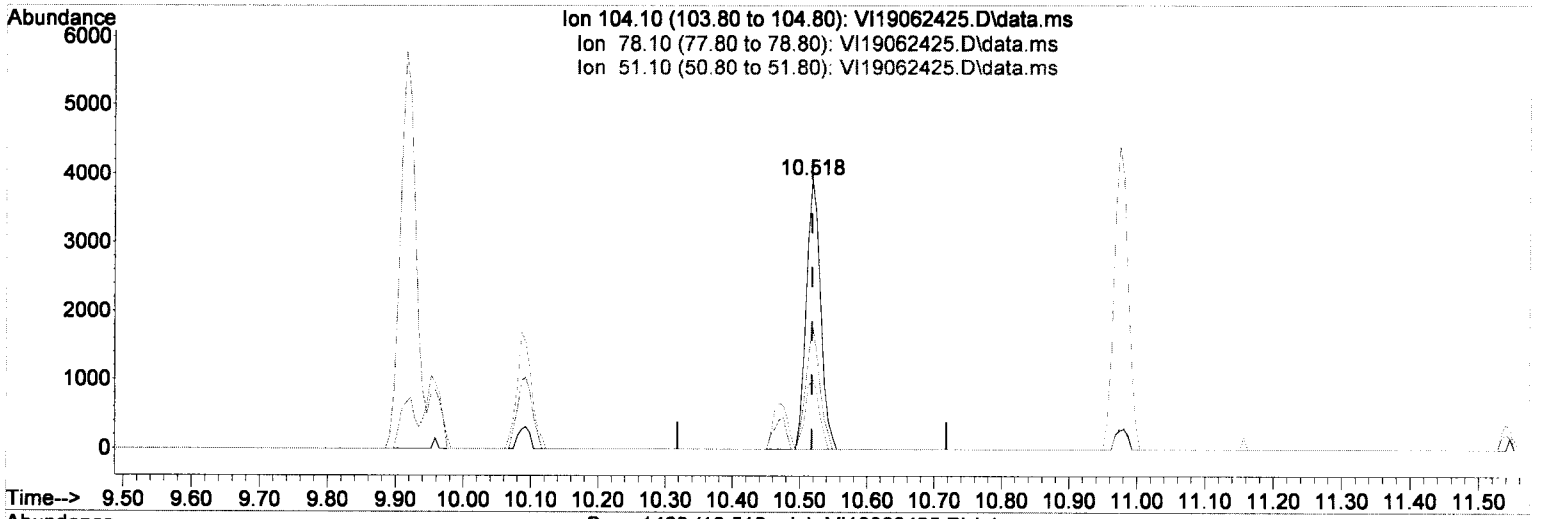
response 9429

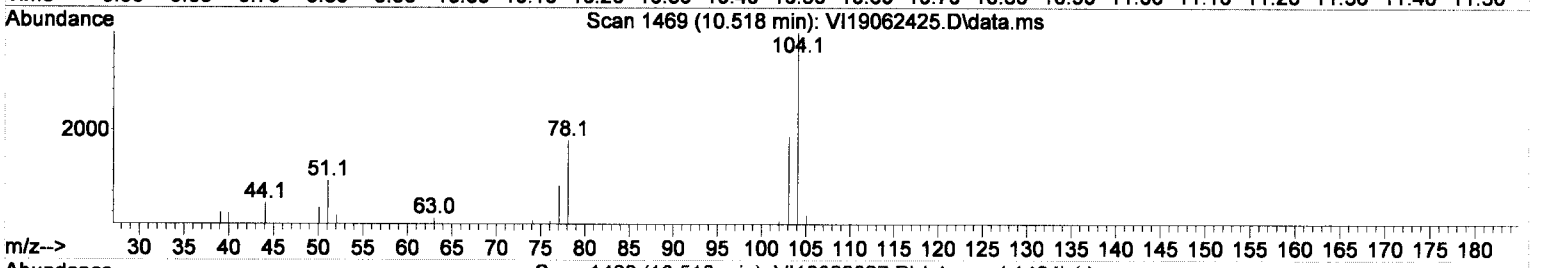
Ion	Exp%	Act%
91.10	100.00	100.00
106.10	48.30	43.98
51.10	10.20	10.96
0.00	0.00	0.00

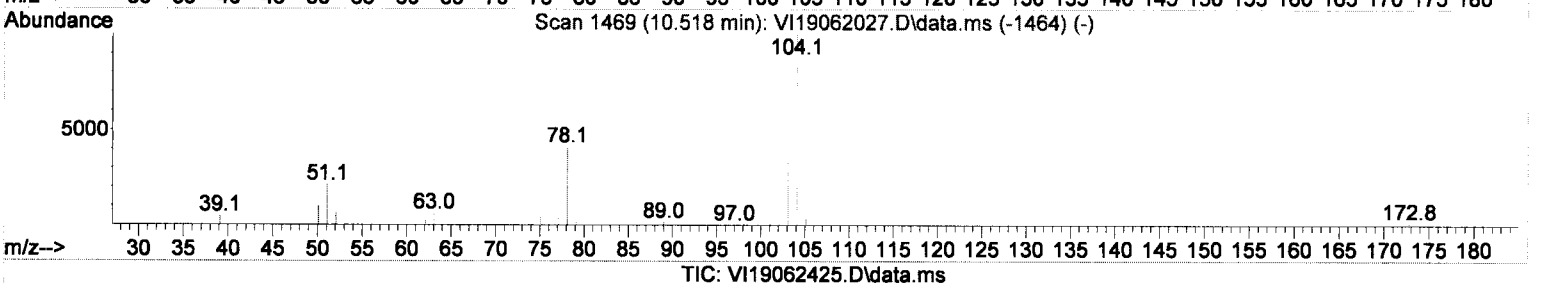
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062425.D
Acq On : 24 Jun 2019 7:22 pm
Operator : TNL
Sample : A9F0692-03RE1@10
Misc : 10X 5mL/50mL 8260C RR-01
ALS Vial : 25 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 25 07:31:55 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration







TIC: VI19062425.D\data.ms

(63) Styrene

10.518min (-0.000) 1.46 ug/L

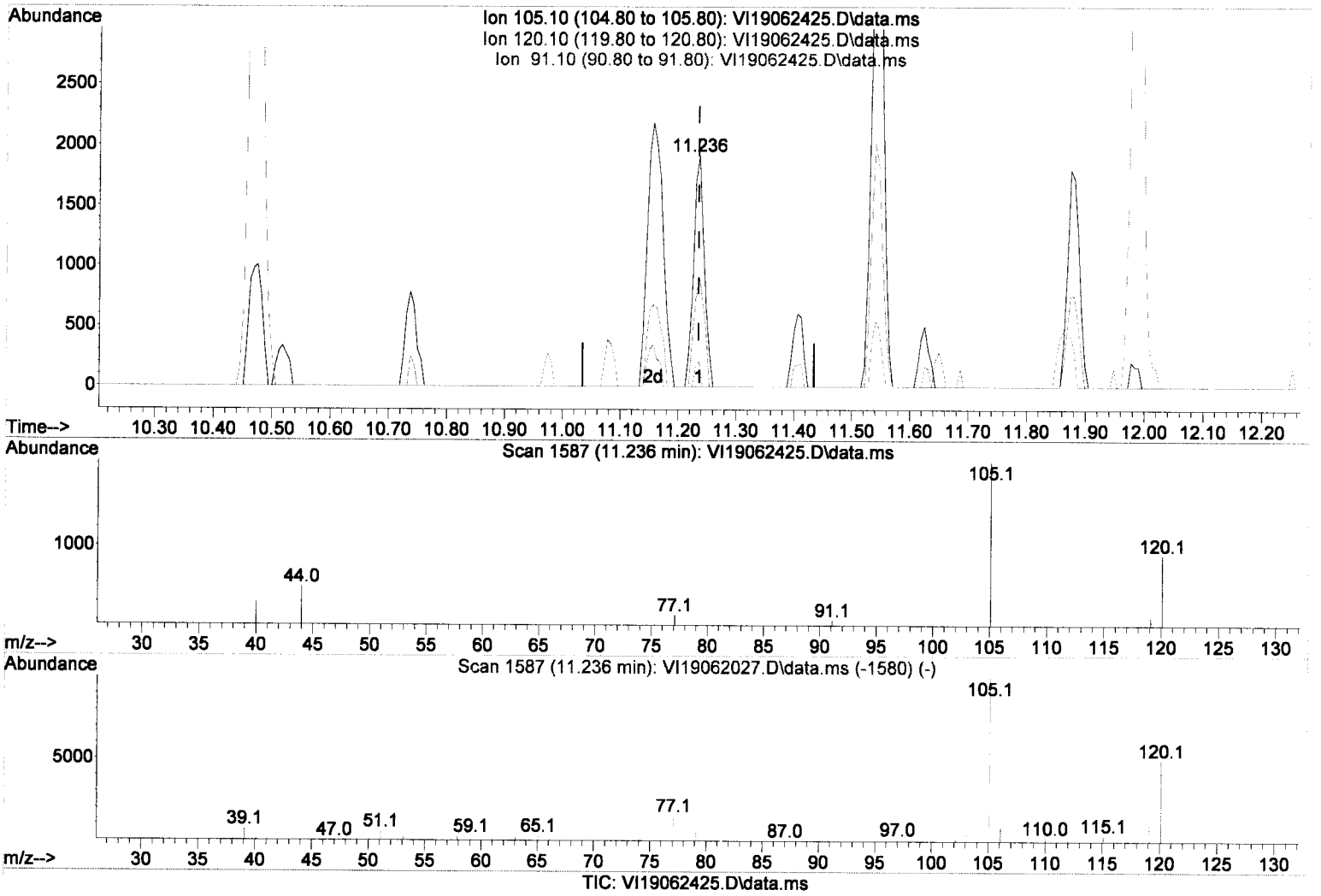
response 5807

Ion	Exp%	Act%
104.10	100.00	100.00
78.10	39.40	46.04
51.10	22.20	25.88
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062425.D
Acq On : 24 Jun 2019 7:22 pm
Operator : TNL
Sample : A9F0692-03RE1@10
Misc : 10X 5mL/50mL 8260C RR-01
ALS Vial : 25 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 25 07:31:55 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



TIC: VI19062425.D\data.ms

(72) 1,3,5-Trimethylbenzene

11.236min (+ 0.001) 0.51 ug/L

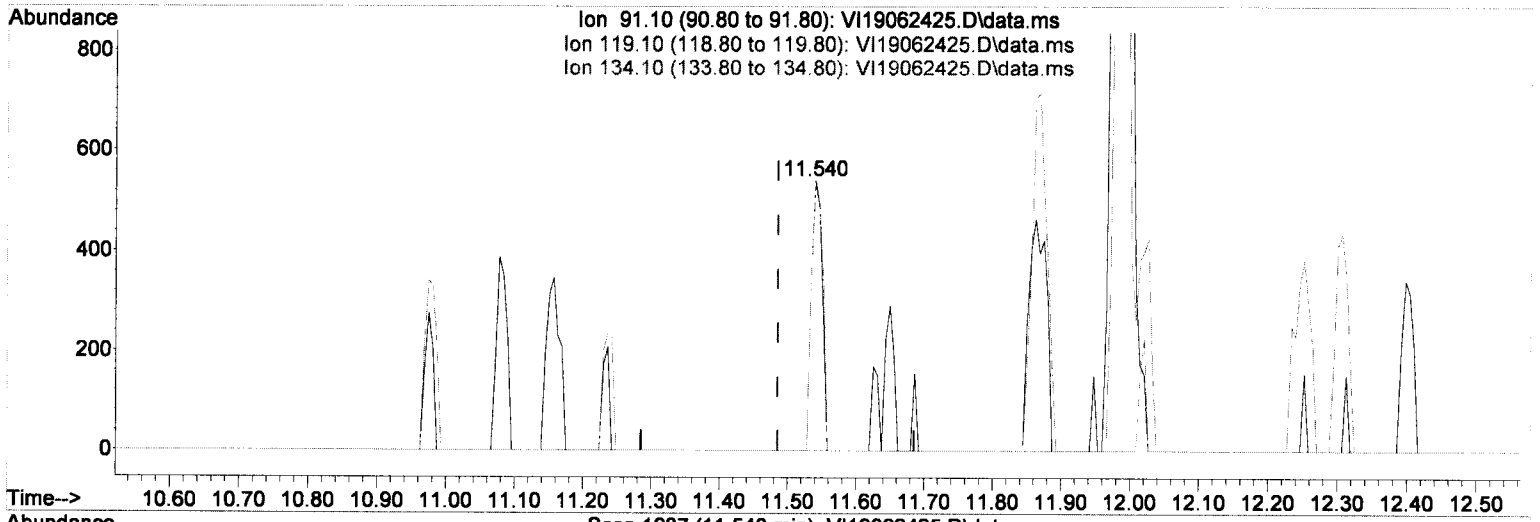
response 2490

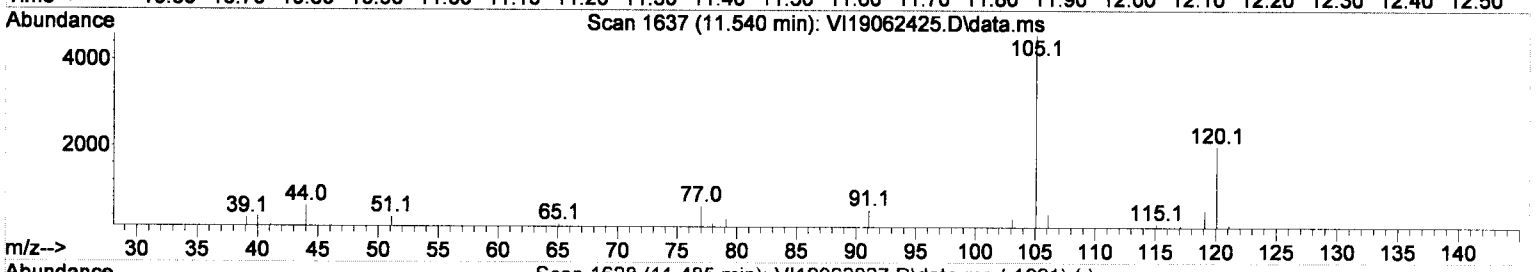
Ion	Exp%	Act%
105.10	100.00	100.00
120.10	49.90	47.34
91.10	10.40	10.82
0.00	0.00	0.00

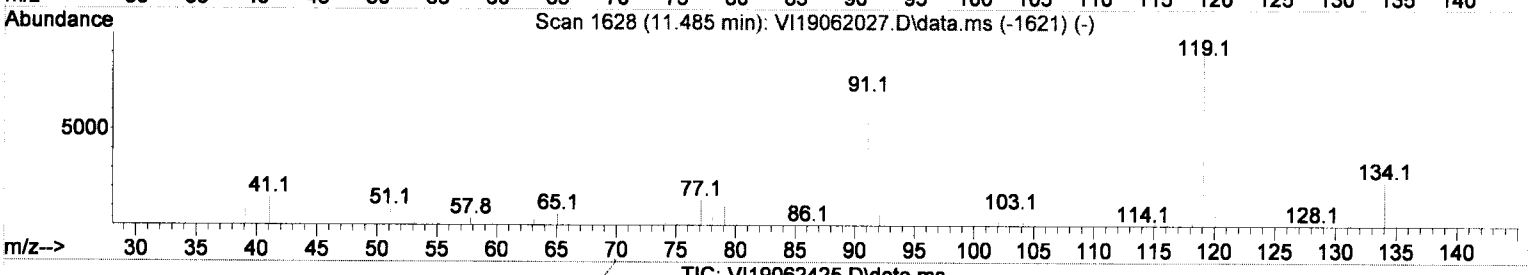
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062425.D
Acq On : 24 Jun 2019 7:22 pm
Operator : TNL
Sample : A9F0692-03RE1@10
Misc : 10X 5mL/50mL 8260C RR-01
ALS Vial : 25 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 25 07:31:55 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration







TIC: VI19062425.D\data.ms

(76) tert-Butylbenzene

11.540min (+ 0.055) 0.21 ug/L

response 596

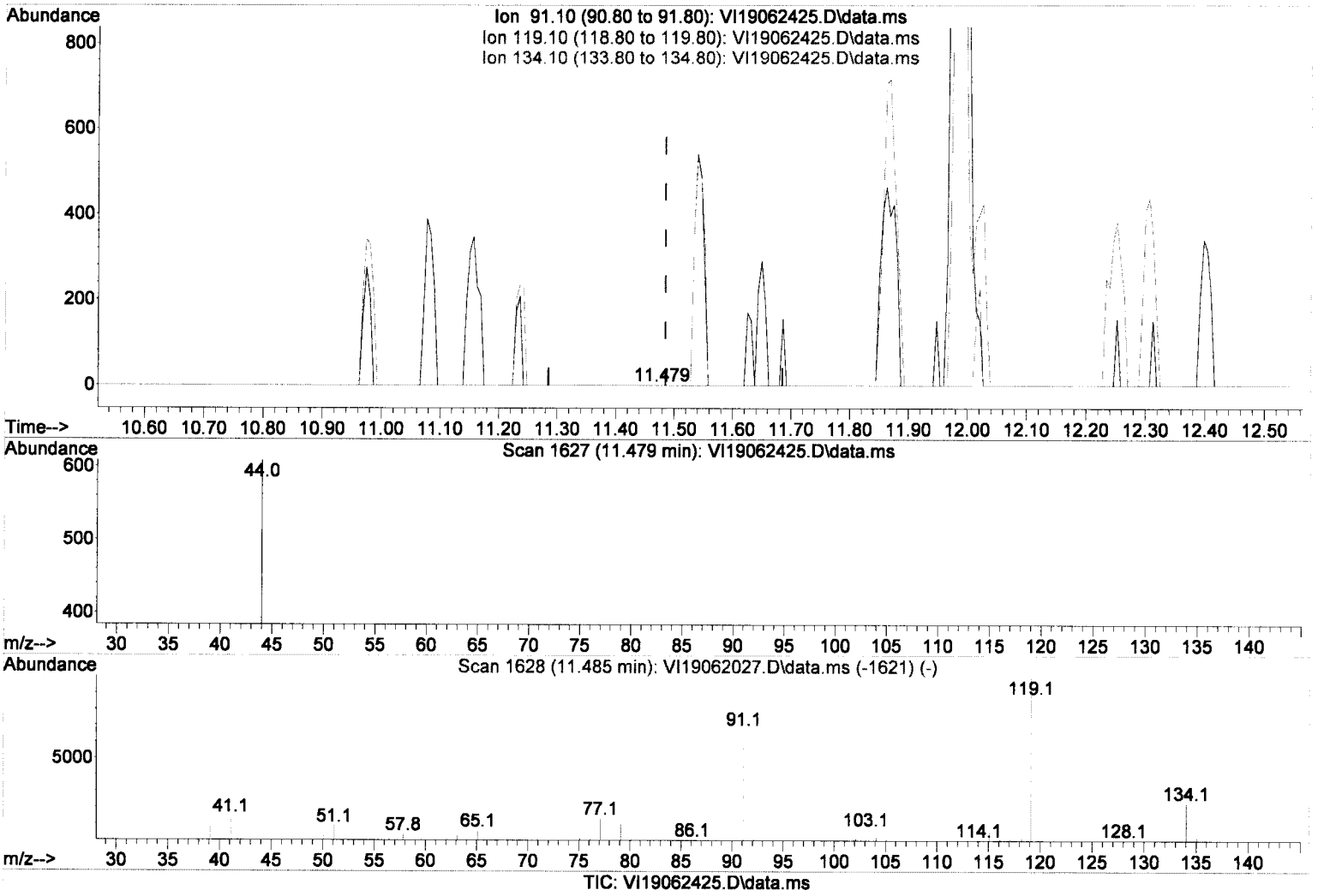
Ion	Exp%	Act%
91.10	100.00	100.00
119.10	156.60	99.26#
134.10	38.80	0.00#
0.00	0.00	0.00

MC 6/25/19 bm

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062425.D
Acq On : 24 Jun 2019 7:22 pm
Operator : TNL
Sample : A9F0692-03RE1@10
Misc : 10X 5mL/50mL 8260C RR-01
ALS Vial : 25 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 25 07:31:55 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



(76) tert-Butylbenzene

11.479min (-0.006) 0.00 ug/L m

response 0

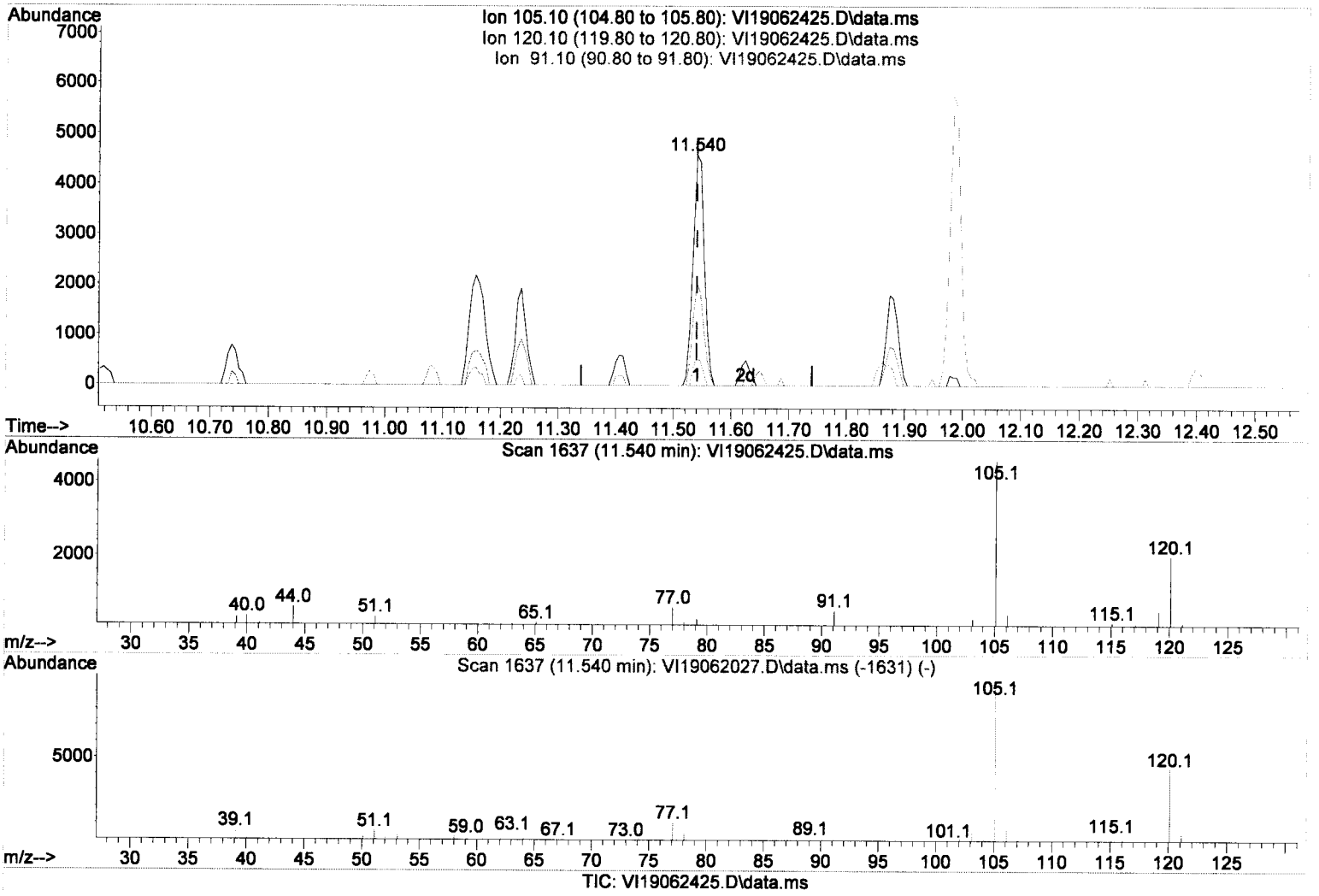
Ion	Exp%	Act%
91.10	100.00	0.00
119.10	156.60	0.00#
134.10	38.80	0.00#
0.00	0.00	0.00

ND 6/25/19 tml

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062425.D
Acq On : 24 Jun 2019 7:22 pm
Operator : TNL
Sample : A9F0692-03RE1@10
Misc : 10X 5mL/50mL 8260C RR-01
ALS Vial : 25 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 25 07:31:55 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



TIC: VI19062425.D\data.ms

(77) 1,2,4-Trimethylbenzene

11.540min (-0.000) 1.27 ug/L

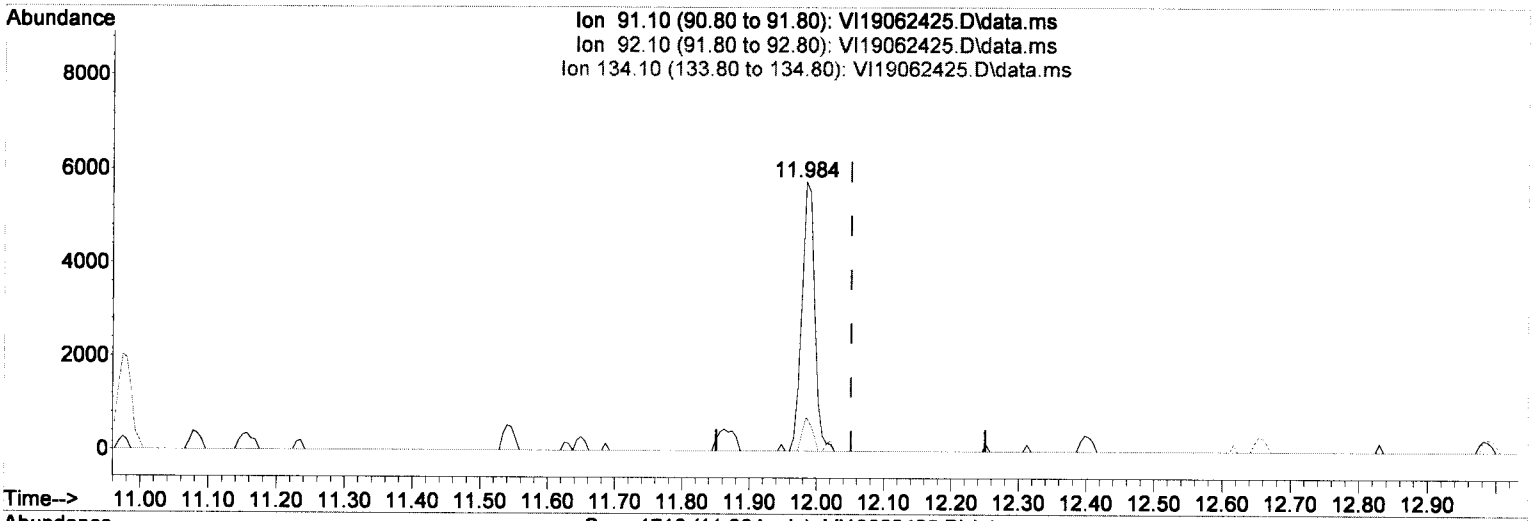
response 6184

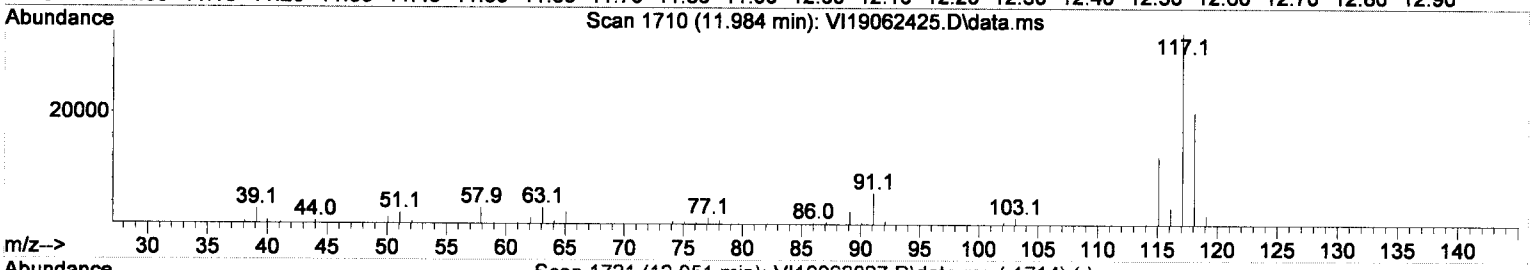
Ion	Exp%	Act%
105.10	100.00	100.00
120.10	49.80	43.99
91.10	10.50	11.78
0.00	0.00	0.00

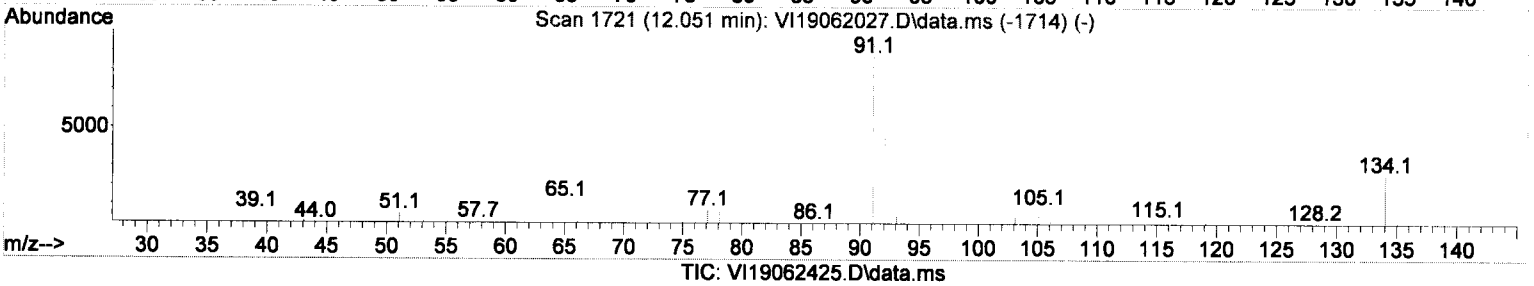
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062425.D
Acq On : 24 Jun 2019 7:22 pm
Operator : TNL
Sample : A9F0692-03RE1@10
Misc : 10X 5mL/50mL 8260C RR-01
ALS Vial : 25 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 25 07:31:55 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration







TIC: VI19062425.D\data.ms

(82) n-Butylbenzene

11.984min (-0.067) 1.76 ug/L

response 7692

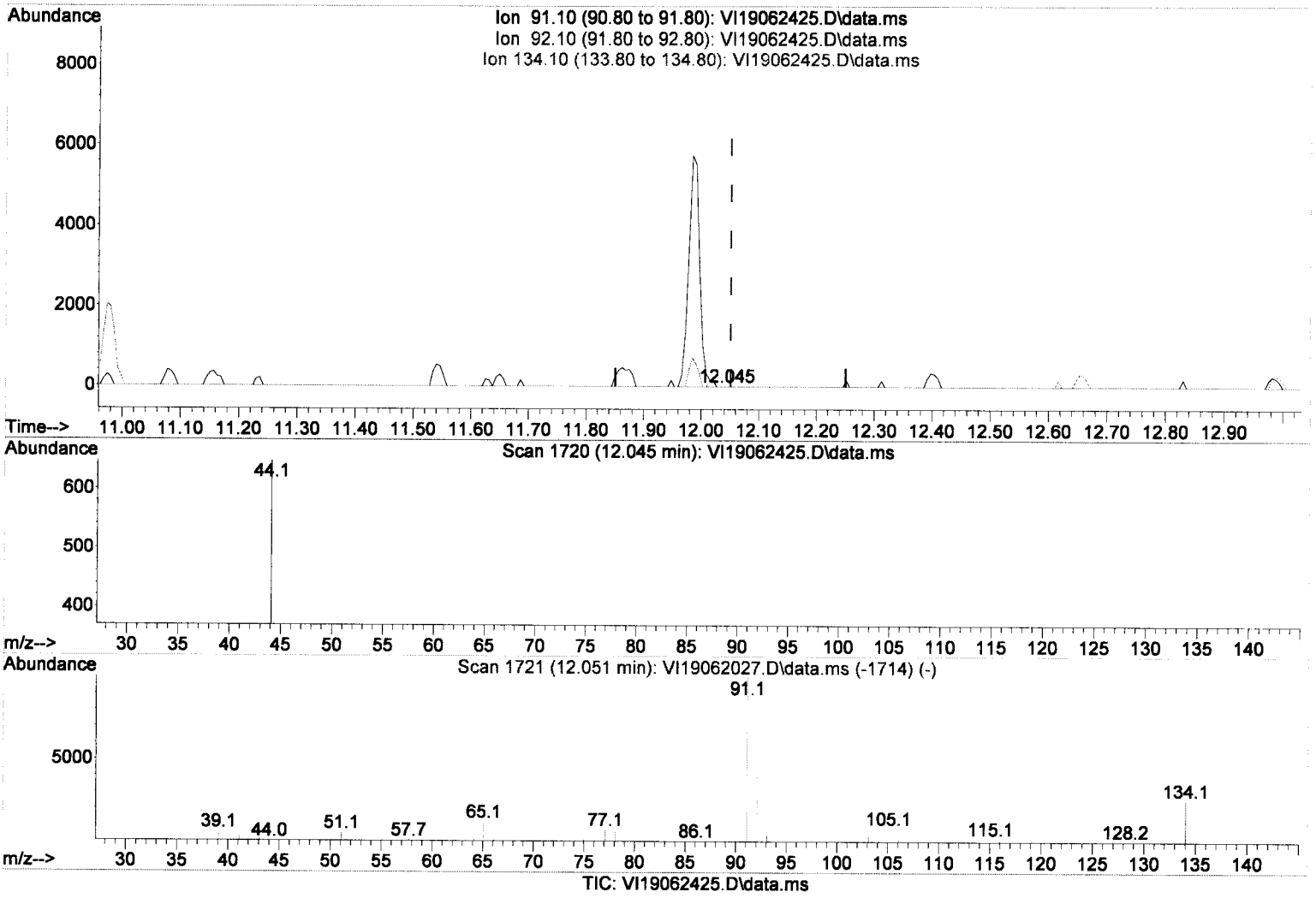
Ion	Exp%	Act%
91.10	100.00	100.00
92.10	55.90	12.43#
134.10	28.20	0.00
0.00	0.00	0.00

MC 6/25/2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062425.D
Acq On : 24 Jun 2019 7:22 pm
Operator : TNL
Sample : A9F0692-03RE1@10
Misc : 10X 5mL/50mL 8260C RR-01
ALS Vial : 25 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 25 07:31:55 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



TIC: VI19062425.D\data.ms

(82) n-Butylbenzene

12.045min (-0.006) 0.00 ug/L m

response 0

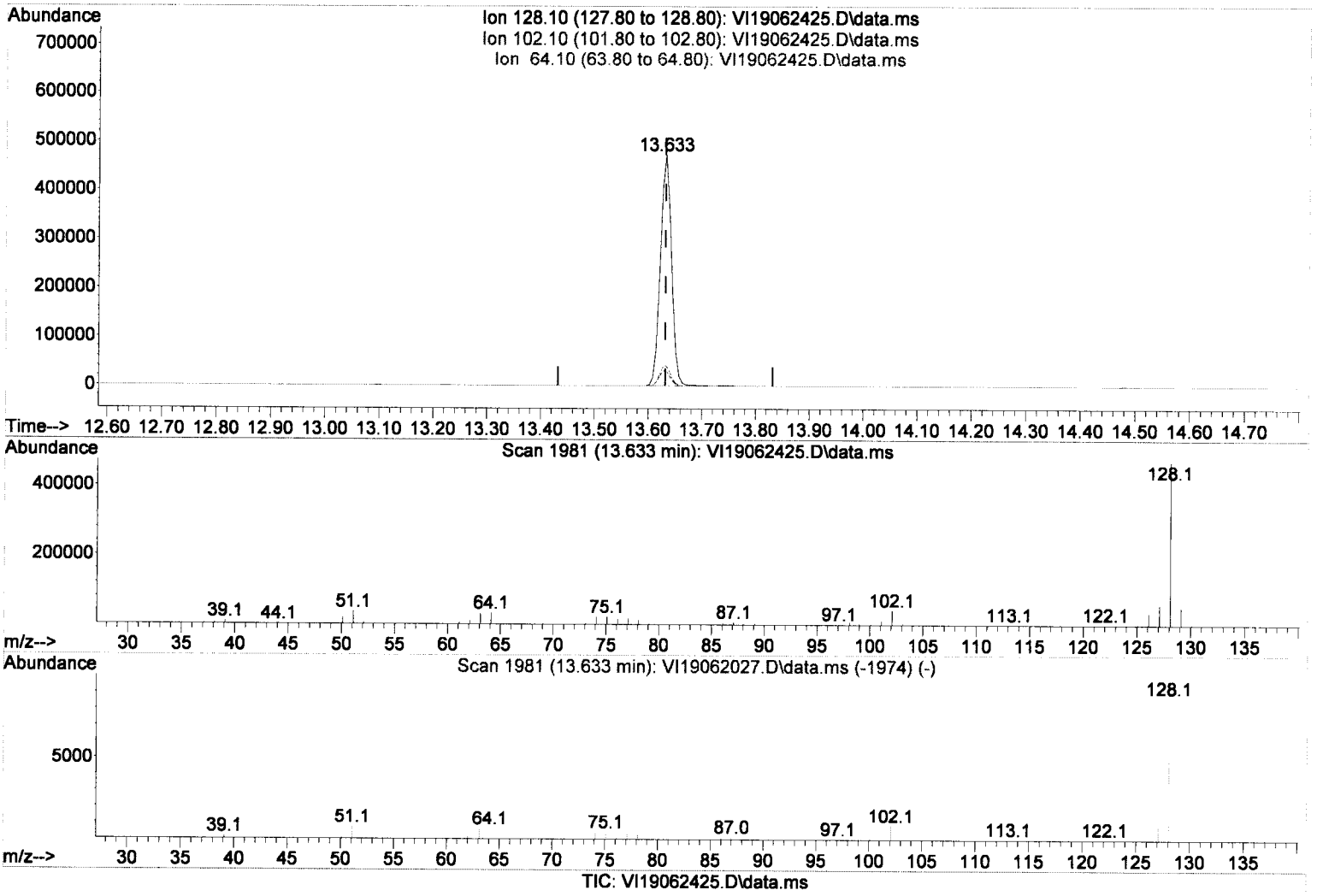
Ion	Exp%	Act%
91.10	100.00	0.00
92.10	55.90	0.00#
134.10	28.20	0.00
0.00	0.00	0.00

NP 6/25/19 mf

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062425.D
Acq On : 24 Jun 2019 7:22 pm
Operator : TNL
Sample : A9F0692-03RE1@10
Misc : 10X 5mL/50mL 8260C RR-01
ALS Vial : 25 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 25 07:31:55 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



(87) Naphthalene

13.633min (+ 0.001) 132.05 ug/L

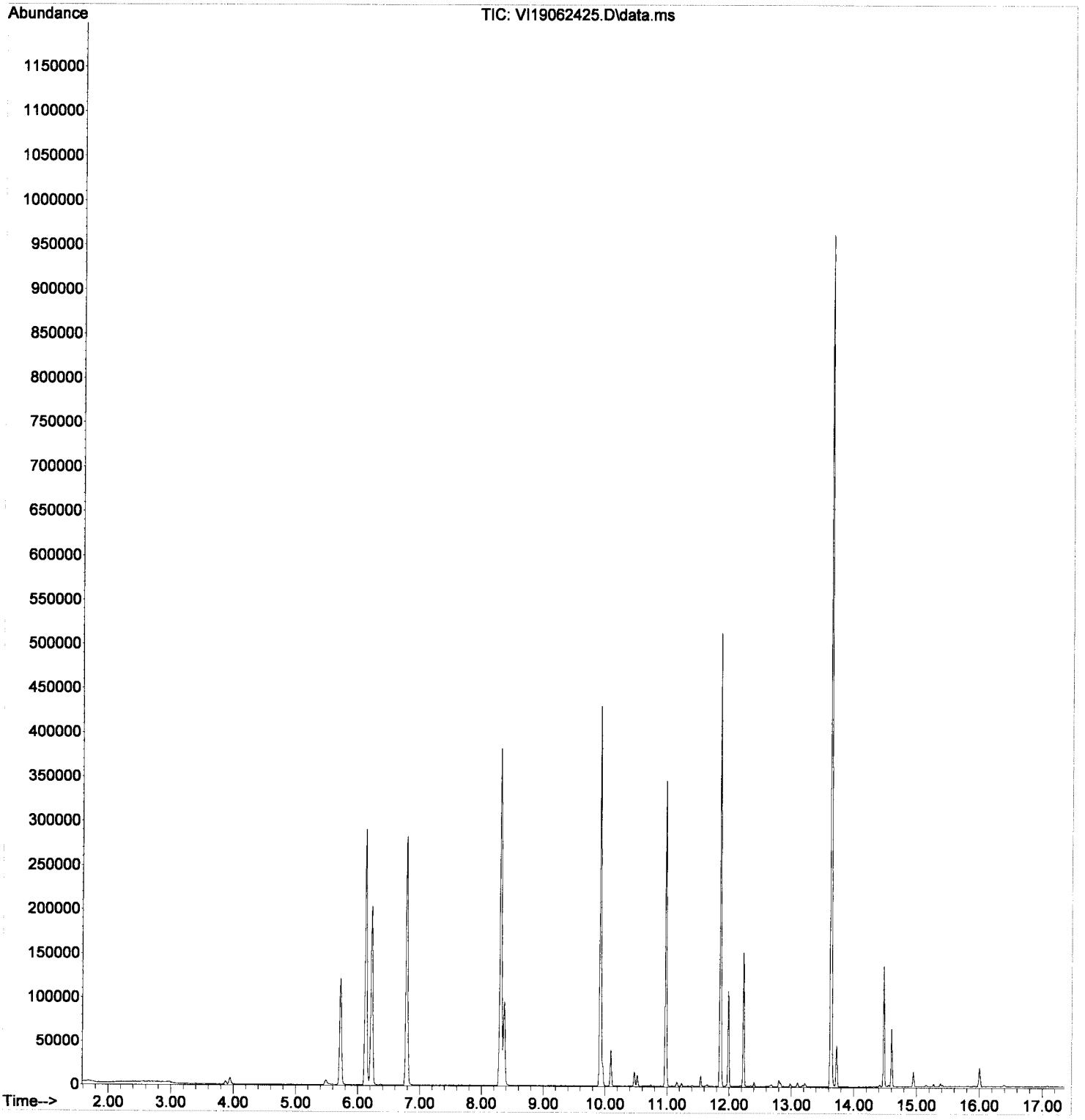
response 682143

Ion	Exp%	Act%
128.10	100.00	100.00
102.10	7.60	8.82
64.10	4.70	6.74
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062425.D
Acq On : 24 Jun 2019 7:22 pm
Operator : TNL
Sample : A9F0692-03RE1@10
Misc : 10X 5mL/50mL 8260C RR-01
ALS Vial : 25 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 25 07:31:55 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062428.D
Acq On : 24 Jun 2019 8:43 pm
Operator : TNL
Sample : 9061200-MS1
Misc : 1X 5mL A19F269 (A9F0709-12)
ALS Vial : 28 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 25 07:32:04 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.223	168	141092	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	9.916	117	218960	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	11.856	152	104485	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	5.724	111	80754	53.09	ug/L		0.00
39) 1,4-Difluorobenzene (S)	6.789	114	241233	51.37	ug/L		0.00
48) Toluene-d8 (S)	8.304	98	285166	49.85	ug/L		0.00
67) 4-Bromofluorobenzene (S)	10.980	174	84494	48.81	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.685	85	33694	23.03	ug/L		100
3) Chloromethane	1.904	50	38721	20.79	ug/L		97
4) Vinyl Chloride	2.007	62	40122	23.91	ug/L		96
5) Bromomethane	2.366	96	13946	16.10	ug/L		97
6) Chloroethane	2.506	64	17202	28.87	ug/L		77
7) Trichlorofluoromethane	2.670	101	51255	27.21	ug/L		97
8) Ethanol	3.242	45	50361	1458.58	ug/L		86
9) 1,1-Dichloroethene	3.242	61	48673	25.53	ug/L		97
10) Carbon Disulfide	3.260	76	79587	23.16	ug/L		99
11) Freon 113	3.297	101	29094	23.49	ug/L		99
12) Iodomethane	3.394	142	3777	7.72	ug/L		93
13) Acrolein	3.631	56	7835	20.40	ug/L		70
14) Methylene Chloride	3.881	84	31283	21.57	ug/L		97
15) Acetone	3.954	43	35993	52.39	ug/L		99
16) t-1,2-Dichloroethene	4.045	61	45274	24.31	ug/L		95
17) n-Hexane	4.130	86	5679	21.84	ug/L	#	52
18) Methyl-tert-butyl-ether	4.179	73	100474	22.04	ug/L		91
19) tert-Butanol (TBA)	4.301	59	448633	1462.05	ug/L		91
20) Diisopropyl ether (DIPE)	4.574	45	26974	5.67	ug/L		90
21) 1,1-Dichloroethane	4.690	63	60808	24.78	ug/L		95
22) Acrylonitrile	4.757	53	19211	24.62	ug/L		99
23) Ethyl-tert-butyl ether...	4.952	59	25075	5.44	ug/L		92
24) Vinyl Acetate	4.964	43	62830	20.23	ug/L		96
25) c-1,2-Dichloroethene	5.250	61	47976	24.14	ug/L		97
26) 2,2-Dichloropropane	5.359	77	39310	20.51	ug/L		97
27) Bromochloromethane	5.457	130	21842	23.84	ug/L		80
28) Chloroform	5.536	83	59936	23.66	ug/L		98
29) Carbon Tetrachloride	5.669	117	37528	24.22	ug/L		95
30) Tetrahydrofuran	5.706	42	18039	22.69	ug/L		87
31) 1,1,1-Trichloroethane	5.742	97	48454	23.99	ug/L		96
33) 1,1-Dichloropropene	5.870	75	45630	23.70	ug/L		98
34) 2-Butanone (MEK)	5.864	43	55508	48.51	ug/L		95
35) Benzene	6.132	78	134150	22.79	ug/L		98
36) tert-Amyl methyl ether...	6.253	73	23076	5.21	ug/L		99
37) 1,2-Dichloroethane (EDC)	6.345	62	48349	24.88	ug/L		95
38) iso-Butyl Alcohol	6.381	43	68192	584.00	ug/L		95
40) Trichloroethene (TCE)	6.752	130	32866	23.08	ug/L		93
41) Tert-Amyl-Ethyl-Ether ...	7.002	59	18242	5.36	ug/L		89
42) Dibromomethane	7.203	93	22345	23.86	ug/L		89
43) 1,2-Dichloropropane	7.318	63	35774	23.73	ug/L		94
44) Bromodichloromethane	7.385	83	42250	24.29	ug/L		94
47) c-1,3-Dichloropropene	8.097	75	46857	20.83	ug/L		95
49) Toluene	8.364	91	134978	21.61	ug/L		97

6/25/19 MS

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062428.D
Acq On : 24 Jun 2019 8:43 pm
Operator : TNL
Sample : 9061200-MS1
Misc : 1X 5mL A19F269 (A9F0709-12)
ALS Vial : 28 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 25 07:32:04 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration

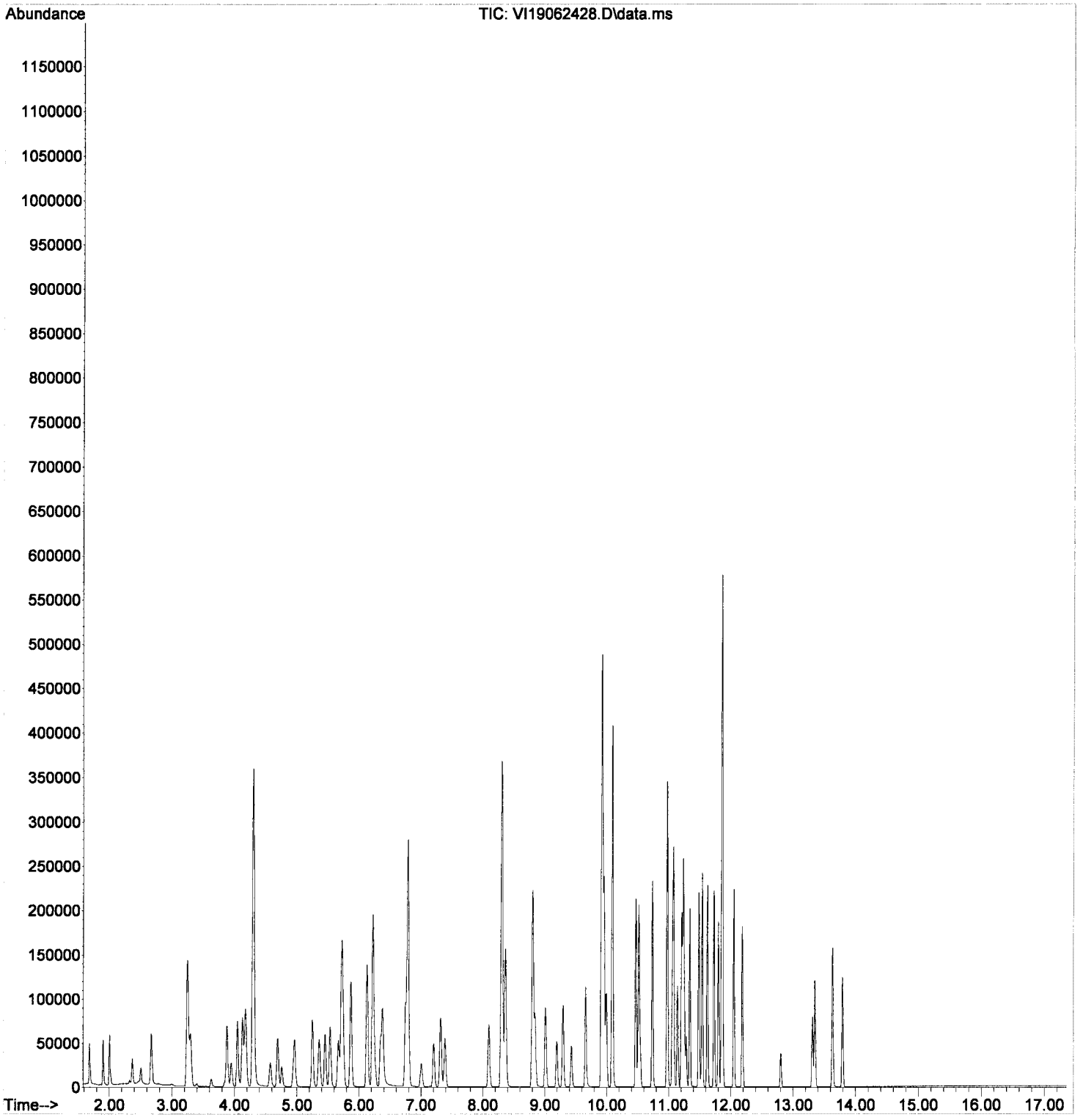
Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
50) Tetrachloroethene (PCE)	8.803	166	31409	22.14 ug/L		85
51) 4-Methyl-2-Pentanone (...	8.809	43	104315	47.64 ug/L		97
52) t-1,3-Dichloropropene	8.845	75	44280	21.50 ug/L		96
53) 1,1,2-Trichloroethane	9.009	97	31116	22.58 ug/L		98
54) Dibromochloromethane	9.192	129	29797	23.06 ug/L		99
55) 1,3-Dichloropropane	9.295	76	55417	22.57 ug/L		95
56) 1,2-Dibromoethane (EDB)	9.429	107	33172	22.86 ug/L		95
57) 2-Hexanone	9.660	43	75272	46.68 ug/L		97
58) Chlorobenzene	9.934	112	83658	22.03 ug/L		93
59) Ethylbenzene	9.958	91	147451	22.54 ug/L		99
60) 1,1,1,2-Tetrachloroethane	9.995	131	27204	23.46 ug/L		96
61) m,p-Xylenes (2)	10.092	91	220733	44.79 ug/L		96
62) o-Xylene	10.469	91	111998	22.30 ug/L		96
63) Styrene	10.518	104	85923	22.39 ug/L		92
64) Bromoform	10.542	173	19711	23.19 ug/L		95
65) Isopropylbenzene	10.737	105	133823	22.49 ug/L		98
68) Bromobenzene	11.066	156	35041	21.88 ug/L	#	84
69) n-Propylbenzene	11.078	91	161888	22.76 ug/L		96
70) 1,1,2,2-Tetrachloroethane	11.145	85	32284	24.06 ug/L		95
71) 2-Chlorotoluene	11.212	126	31441	21.89 ug/L		95
72) 1,3,5-Trimethylbenzene	11.236	105	107507	22.37 ug/L		98
73) 1,2,3-Trichloropropane	11.254	110	14555	23.63 ug/L		98
74) t-1,4-Dichloro-2-butene	11.285	53	10800	20.77 ug/L	#	71
75) 4-Chlorotoluene	11.339	91	99940	22.44 ug/L		92
76) tert-Butylbenzene	11.485	91	62848	22.69 ug/L		88
77) 1,2,4-Trimethylbenzene	11.540	105	110222	22.87 ug/L		93
78) sec-Butylbenzene	11.625	105	134610	22.58 ug/L		98
79) 4-Isopropyltoluene	11.729	119	107880	22.93 ug/L		97
80) 1,3-Dichlorobenzene	11.802	146	62211	22.20 ug/L		96
81) 1,4-Dichlorobenzene	11.869	146	63096	21.81 ug/L		95
82) n-Butylbenzene	12.051	91	101943	23.62 ug/L		96
83) 1,2-Dichlorobenzene	12.185	146	59992	22.10 ug/L		97
84) 1,2-Dibromo-3-Chloropr...	12.806	157	9208	21.73 ug/L		74
85) Hexachlorobutadiene	13.310	223	8448	21.59 ug/L		94
86) 1,2,4-Trichlorobenzene	13.353	180	35041	22.44 ug/L		97
87) Naphthalene	13.633	128	112320	21.99 ug/L		96
88) 1,2,3-Trichlorobenzene	13.791	180	34042	22.46 ug/L		94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F24026\
Data File : VI19062428.D
Acq On : 24 Jun 2019 8:43 pm
Operator : TNL
Sample : 9061200-MS1
Misc : 1X 5mL A19F269 (A9F0709-12)
ALS Vial : 28 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 25 07:32:04 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



Volatile Organic Compounds by EPA 8260C
Calibration Data

Sequence 9F20044 (Cal ID A9F2102) VOA-GCMS9

ELEMENT SEQUENCE LOG

Apex Laboratories

Sequence:	9F20044	Instrument:	VOA-GCMS9
Date:	06/20/19 16:38	Calibration:	A9F2102

#	Lab Number	Matrix	Analysis	Client	Due	Batch	ISTD ID	STD ID
1	9F20044-IBL1	Water	QC	QC			A19C125	
2	9F20044-TUN1	Water	QC	QC			A19C125	
3	9F20044-ICB1	Water	QC	QC			A19C125	
4	9F20044-CAL1	Water	QC	QC			A19C125	A19F282
5	9F20044-CAL2	Water	QC	QC			A19C125	A19F283
6	9F20044-CAL3	Water	QC	QC			A19C125	A19F284
7	9F20044-CAL4	Water	QC	QC			A19C125	A19F285
8	9F20044-CAL5	Water	QC	QC			A19C125	A19F286
9	9F20044-CAL6	Water	QC	QC			A19C125	A19F287
10	9F20044-CAL7	Water	QC	QC			A19C125	A19F288
11	9F20044-CAL8	Water	QC	QC			A19C125	A19F289
12	9F20044-CAL9	Water	QC	QC			A19C125	A19F290
13	9F20044-IBL2	Water	QC	QC			A19C125	
14	9F20044-CALA	Water	QC	QC			A19C125	A19F291
15	9F20044-IBL3	Water	QC	QC			A19C125	
16	9F20044-CALB	Water	QC	QC			A19C125	A19F292
17	9F20044-IBL4	Water	QC	QC			A19C125	
18	9F20044-IBL5	Water	QC	QC			A19C125	
19	9F20044-ICV1	Water	QC	QC			A19C125	A19F293
20	9F20044-ICV2	Water	QC	QC			A19C125	A19E195
21	9F20044-IBL6	Water	QC	QC			A19C125	
22	9F20044-TUN2	Water	QC	QC			A19C125	
23	9F20044-ICB2	Water	QC	QC			A19E148	
24	9F20044-IBL7	Water	QC	QC			A19C125	
25	9F20044-CALC	Water	QC	QC			A19C125	A19F179
26	9F20044-CALD	Water	QC	QC			A19C125	A19F176
27	9F20044-CALE	Water	QC	QC			A19C125	A19F177
28	9F20044-CALF	Water	QC	QC			A19C125	A19F178
29	9F20044-CALG	Water	QC	QC			A19C125	A19F180
30	9F20044-CALH	Water	QC	QC			A19C125	A19F181
31	9F20044-CALI	Water	QC	QC			A19C125	A19F182
32	9F20044-CALJ	Water	QC	QC			A19C125	A19F183
33	9F20044-IBL8	Water	QC	QC			A19C125	
34	9F20044-IBL9	Water	QC	QC			A19C125	
35	9F20044-ICV3	Water	QC	QC			A19C125	A19B262
36	9F20044-IBLA	Water	QC	QC			A19C125	

+ Reactives
+ OXY

Data Entered By: 6/21/19

Data Reviewed By: 6/21/19

Comments:

Calibration Status Report VOA-GCMS9

Method Path : C:\msdchem\1\methods\
Method File : VI190621W+.M
Title : EPA 8260: Volatile Organic Compounds
Last Update : Fri Jun 21 10:05:40 2019
Response Via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	0.1	-1	50	C:\msdchem\1\data\2019-06\9F20044\VI19062020.D
2	0.2	0	50	C:\msdchem\1\data\2019-06\9F20044\VI19062021.D
3	0.5	0	50	C:\msdchem\1\data\2019-06\9F20044\VI19062022.D
4	1	1	50	C:\msdchem\1\data\2019-06\9F20044\VI19062023.D
5	2	2	50	C:\msdchem\1\data\2019-06\9F20044\VI19062024.D
6	5	5	50	C:\msdchem\1\data\2019-06\9F20044\VI19062025.D
7	10	10	50	C:\msdchem\1\data\2019-06\9F20044\VI19062026.D
8	20	20	50	C:\msdchem\1\data\2019-06\9F20044\VI19062027.D
9	50	50	50	C:\msdchem\1\data\2019-06\9F20044\VI19062028.D
10	100	100	50	C:\msdchem\1\data\2019-06\9F20044\VI19062030.D
11	200	200	50	C:\msdchem\1\data\2019-06\9F20044\VI19062032.D

#	ID	Update Time	Quant Time	Acquisition Time
1	0.1	Jun 21 10:05 2019	Jun 21 09:50 2019	20 Jun 2019 6:16 pm
2	0.2	Jun 21 10:05 2019	Jun 21 09:52 2019	20 Jun 2019 6:43 pm
3	0.5	Jun 21 10:05 2019	Jun 21 09:55 2019	20 Jun 2019 7:10 pm
4	1	Jun 21 10:05 2019	Jun 21 09:56 2019	20 Jun 2019 7:37 pm
5	2	Jun 21 10:05 2019	Jun 21 09:58 2019	20 Jun 2019 8:04 pm
6	5	Jun 21 10:05 2019	Jun 21 09:46 2019	20 Jun 2019 8:31 pm
7	10	Jun 21 10:05 2019	Jun 21 09:46 2019	20 Jun 2019 8:58 pm
8	20	Jun 21 10:05 2019	Jun 21 09:46 2019	20 Jun 2019 9:25 pm
9	50	Jun 21 10:05 2019	Jun 21 09:46 2019	20 Jun 2019 9:52 pm
10	100	Jun 21 10:05 2019	Jun 21 09:46 2019	20 Jun 2019 10:46 pm
11	200	Jun 21 10:05 2019	Jun 21 10:04 2019	20 Jun 2019 11:40 pm

VI190621W+.M Fri Jun 21 10:41:31 2019

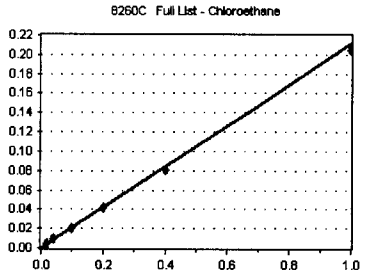
Element Calibration Review Sheet

Calibration ID: **A9F2102** Instrument: **VOA-GCMS9** Calibration Date: **06/21/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VI190621W+.M VI190621G.I**

Chloroethane

Curve Fit: **AVERAGE RF**

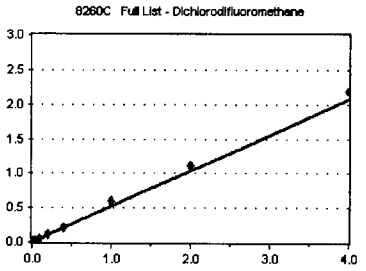


Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL4	1	908	0.214	0.00
9F20044-CAL5	2	1914	0.231	0.00
9F20044-CAL6	5	4333	0.206	2.51
9F20044-CAL7	10	8771	0.210	2.51
9F20044-CAL8	20	17079	0.202	2.50
9F20044-CAL9	50	41565	0.204	2.50
~~9F20044-CALA~~	~~100~~	~~41076~~	~~9.548~~	~~2.51~~
~~9F20044-CALB~~	~~200~~	~~72831~~	~~8.917~~	~~2.49~~

AVE RF **0.211** RF RSD **5.05** AVE RT **1.67**

Dichlorodifluoromethane

Curve Fit: **AVERAGE RF**

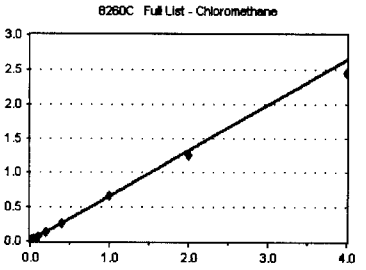


Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL3	0.4	715	0.413	1.69
9F20044-CAL4	1	1914	0.451	1.69
9F20044-CAL5	2	4211	0.508	1.68
9F20044-CAL6	5	10727	0.510	1.69
9F20044-CAL7	10	22869	0.548	1.69
9F20044-CAL8	20	45341	0.535	1.68
9F20044-CAL9	50	120443	0.592	1.69
9F20044-CALA	100	242339	0.563	1.69
9F20044-CALB	200	445670	0.546	1.68

AVE RF **0.518** RF RSD **10.82** AVE RT **1.68**

Chloromethane

Curve Fit: **AVERAGE RF**

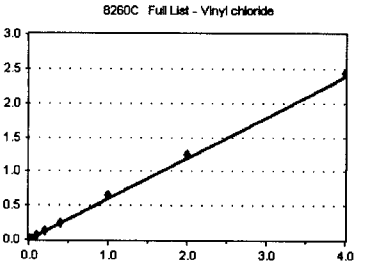


Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~680~~	~~1.341~~	~~1.91~~
~~9F20044-CAL2~~	~~0.2~~	~~842~~	~~0.981~~	~~1.89~~
9F20044-CAL3	0.4	1399	0.808	1.90
9F20044-CAL4	1	2855	0.673	1.90
9F20044-CAL5	2	5408	0.653	1.90
9F20044-CAL6	5	12884	0.612	1.90
9F20044-CAL7	10	27212	0.652	1.90
9F20044-CAL8	20	53847	0.636	1.90
9F20044-CAL9	50	136445	0.671	1.90
9F20044-CALA	100	268247	0.624	1.90
9F20044-CALB	200	500665	0.613	1.90

AVE RF **0.660** RF RSD **9.10** AVE RT **1.90**

Vinyl chloride

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL2	0.2	502	0.585	2.00
9F20044-CAL3	0.4	1014	0.586	2.01
9F20044-CAL4	1	2289	0.539	2.00
9F20044-CAL5	2	4635	0.559	2.00
9F20044-CAL6	5	11994	0.570	2.00
9F20044-CAL7	10	25922	0.621	2.00
9F20044-CAL8	20	51551	0.608	2.00
9F20044-CAL9	50	131880	0.649	2.00
9F20044-CALA	100	267614	0.622	2.01
9F20044-CALB	200	495944	0.607	2.00

AVE RF **0.595** RF RSD **5.54** AVE RT **2.00**

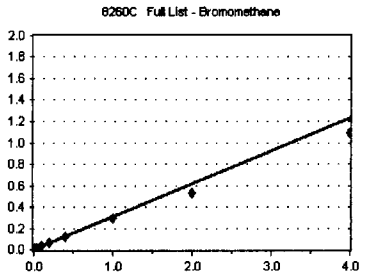
Element Calibration Review Sheet

Calibration ID: **A9F2102** Instrument: **VOA-GCMS9** Calibration Date: **06/21/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VI190621W+.M VI190621G.I**

Bromomethane

Curve Fit: **AVERAGE RF**

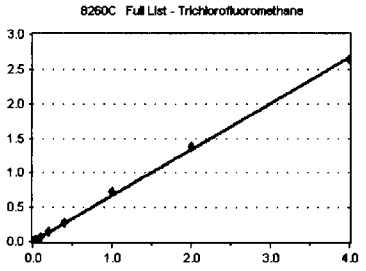


Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL4	1	1674	0.394	2.37
9F20044-CAL5	2	2788	0.337	2.36
9F20044-CAL6	5	6144	0.292	2.37
9F20044-CAL7	10	12781	0.306	2.37
9F20044-CAL8	20	25381	0.300	2.37
9F20044-CAL9	50	58858	0.289	2.37
9F20044-CALA	100	114028	0.265	2.37
9F20044-CALB	200	223036	0.273	2.37

AVE RF **0.307** RF RSD **13.50** AVE RT **2.37**

Trichlorofluoromethane

Curve Fit: **AVERAGE RF**

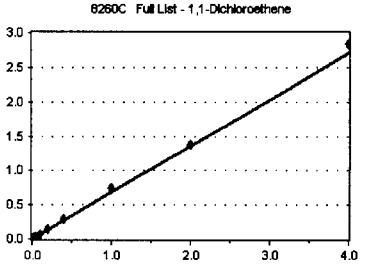


Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL3	0.4	995	0.575	2.68
9F20044-CAL4	1	2781	0.655	2.67
9F20044-CAL5	2	5447	0.657	2.67
9F20044-CAL6	5	13723	0.652	2.67
9F20044-CAL7	10	29578	0.709	2.68
9F20044-CAL8	20	58229	0.687	2.66
9F20044-CAL9	50	147150	0.724	2.67
9F20044-CALA	100	296413	0.689	2.67
9F20044-CALB	200	538727	0.660	2.66

AVE RF **0.668** RF RSD **6.45** AVE RT **2.67**

1,1-Dichloroethene

Curve Fit: **AVERAGE RF**

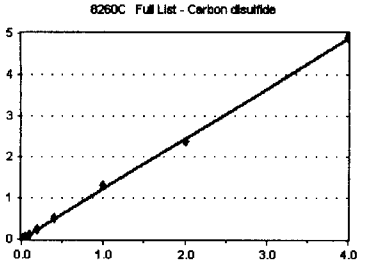


Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL2	0.2	456	0.531	3.24
9F20044-CAL3	0.4	1077	0.622	3.24
9F20044-CAL4	1	2735	0.644	3.24
9F20044-CAL5	2	5714	0.690	3.24
9F20044-CAL6	5	14113	0.671	3.24
9F20044-CAL7	10	30179	0.723	3.24
9F20044-CAL8	20	60935	0.719	3.24
9F20044-CAL9	50	152871	0.752	3.24
9F20044-CALA	100	298169	0.693	3.24
9F20044-CALB	200	581132	0.711	3.24

AVE RF **0.676** RF RSD **9.41** AVE RT **3.24**

Carbon disulfide

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
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~~9F20044-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL3	0.4	2039	1.178	3.26
9F20044-CAL4	1	4926	1.161	3.25
9F20044-CAL5	2	9921	1.197	3.25
9F20044-CAL6	5	24895	1.183	3.25
9F20044-CAL7	10	53141	1.273	3.26
9F20044-CAL8	20	106077	1.252	3.25
9F20044-CAL9	50	265043	1.303	3.25
9F20044-CALA	100	511828	1.190	3.26
9F20044-CALB	200	996935	1.221	3.25

AVE RF **1.218** RF RSD **3.98** AVE RT **3.26**

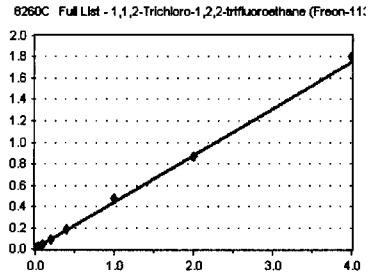
Element Calibration Review Sheet

Calibration ID: **A9F2102** Instrument: **VOA-GCMS9** Calibration Date: **06/21/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VI190621W+.M VI190621G.I**

1,1,2-Trichloro-1,2,2-trifluoroetha

Curve Fit: **AVERAGE RF**

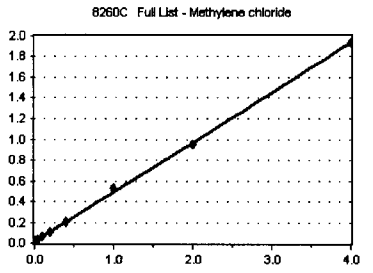


Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL4	1	1682	0.396	3.29
9F20044-CAL5	2	3564	0.430	3.29
9F20044-CAL6	5	8855	0.421	3.29
9F20044-CAL7	10	19042	0.456	3.29
9F20044-CAL8	20	38212	0.451	3.29
9F20044-CAL9	50	96319	0.474	3.29
9F20044-CALA	100	185413	0.431	3.30
9F20044-CALB	200	369170	0.452	3.29

AVE RF **0.439** RF RSD **5.52** AVE RT **3.29**

Methylene chloride

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

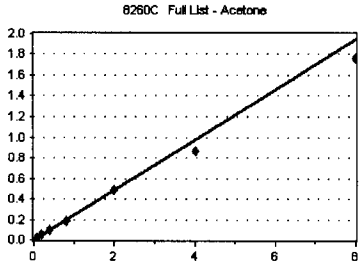


Standard	Concentration	Response	Response Factor	RT
9F20044-CAL1	0.1	5025	11.618	3.88
9F20044-CAL2	0.2	3802	4.431	3.88
9F20044-CAL3	0.4	3778	2.183	3.88
9F20044-CAL4	1	5068	1.194	3.88
9F20044-CAL5	2	7259	0.876	3.88
9F20044-CAL6	5	12982	0.617	3.88
9F20044-CAL7	10	23309	0.559	3.88
9F20044-CAL8	20	43827	0.517	3.88
9F20044-CAL9	50	106690	0.525	3.88
9F20044-CALA	100	204285	0.475	3.88
9F20044-CALB	200	395740	0.484	3.88

AVE RF **2.135** RF RSD **157.60** AVE RT **3.88**

Acetone

Curve Fit: **AVERAGE RF**

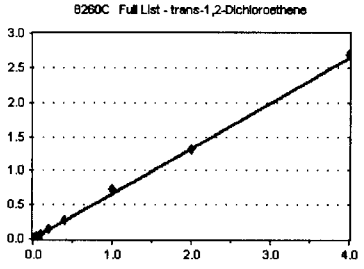


Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL2~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL3~~	~~0.8~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL4~~	~~2~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL5	4	4813	0.290	3.95
9F20044-CAL6	10	10828	0.257	3.95
9F20044-CAL7	20	20886	0.250	3.95
9F20044-CAL8	40	38901	0.230	3.94
9F20044-CAL9	100	98222	0.241	3.95
9F20044-CALA	200	185269	0.215	3.95
9F20044-CALB	400	359555	0.220	3.94

AVE RF **0.243** RF RSD **10.58** AVE RT **3.95**

trans-1,2-Dichloroethene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL3	0.4	1032	0.596	4.05
9F20044-CAL4	1	2591	0.611	4.05
9F20044-CAL5	2	5449	0.658	4.05
9F20044-CAL6	5	13534	0.643	4.05
9F20044-CAL7	10	29093	0.697	4.05
9F20044-CAL8	20	57700	0.681	4.05
9F20044-CAL9	50	146773	0.722	4.05
9F20044-CALA	100	283049	0.658	4.05
9F20044-CALB	200	550967	0.675	4.04

AVE RF **0.660** RF RSD **6.02** AVE RT **4.05**

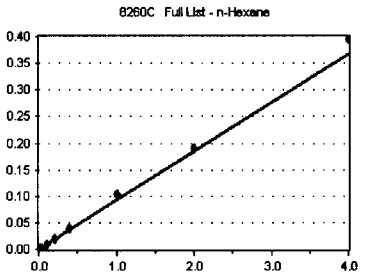
Element Calibration Review Sheet

Calibration ID: **A9F2102** Instrument: **VOA-GCMS9** Calibration Date: **06/21/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VI190621W+.M VI190621G.I**

n-Hexane

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL4	1	322	7.588	4.13
9F20044-CAL5	2	660	7.966	4.12
9F20044-CAL6	5	1835	8.718	4.13
9F20044-CAL7	10	4064	0.097	4.13
9F20044-CAL8	20	8288	9.782	4.12
9F20044-CAL9	50	21296	0.105	4.12
9F20044-CALA	100	41081	9.549	4.13
9F20044-CALB	200	80961	9.912	4.12

AVE RF **9.216** RF RSD **11.03** AVE RT **4.13**

Methyl tert-butyl ether (MTBE)

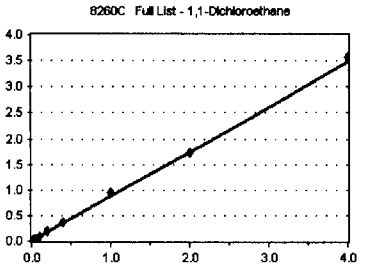
Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL3	0.4	2633	1.521	4.19
9F20044-CAL4	1	6733	1.587	4.17
9F20044-CAL5	2	12876	1.554	4.17
9F20044-CAL6	5	33795	1.606	4.18
9F20044-CAL7	10	68708	1.646	4.17
9F20044-CAL8	20	139596	1.648	4.17
9F20044-CAL9	50	355406	1.748	4.17
9F20044-CALA	100	687445	1.598	4.18
9F20044-CALB	200	1335564	1.635	4.17

AVE RF **1.616** RF RSD **4.02** AVE RT **4.18**

1,1-Dichloroethane

Curve Fit: **AVERAGE RF**

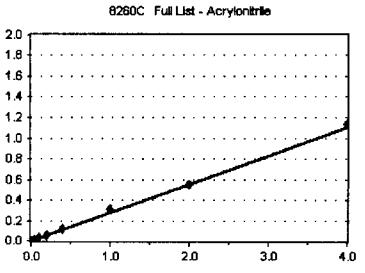


Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL3	0.4	1280	0.740	4.69
9F20044-CAL4	1	3536	0.833	4.68
9F20044-CAL5	2	7318	0.883	4.69
9F20044-CAL6	5	17942	0.852	4.69
9F20044-CAL7	10	38535	0.923	4.69
9F20044-CAL8	20	75912	0.896	4.69
9F20044-CAL9	50	192771	0.948	4.69
9F20044-CALA	100	370610	0.861	4.70
9F20044-CALB	200	726726	0.890	4.69

AVE RF **0.870** RF RSD **6.91** AVE RT **4.69**

Acrylonitrile

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL4	1	1079	0.254	4.76
9F20044-CAL5	2	2105	0.254	4.76
9F20044-CAL6	5	5714	0.271	4.76
9F20044-CAL7	10	11651	0.279	4.76
9F20044-CAL8	20	24079	0.284	4.76
9F20044-CAL9	50	62678	0.308	4.75
9F20044-CALA	100	119204	0.277	4.76
9F20044-CALB	200	232029	0.284	4.75

AVE RF **0.277** RF RSD **6.34** AVE RT **4.76**

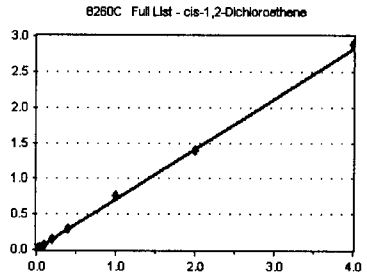
Element Calibration Review Sheet

Calibration ID: **A9F2102** Instrument: **VOA-GCMS9** Calibration Date: **06/21/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VI190621W+.M VI190621G.I**

cis-1,2-Dichloroethene

Curve Fit: **AVERAGE RF**

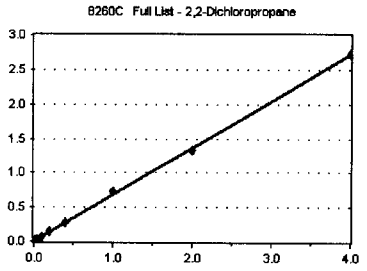


Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL3	0.4	1145	0.662	5.25
9F20044-CAL4	1	2829	0.667	5.26
9F20044-CAL5	2	5852	0.706	5.25
9F20044-CAL6	5	14214	0.675	5.25
9F20044-CAL7	10	30222	0.724	5.25
9F20044-CAL8	20	61245	0.723	5.25
9F20044-CAL9	50	155174	0.763	5.25
9F20044-CALA	100	300456	0.698	5.25
9F20044-CALB	200	588700	0.721	5.25

AVE RF **0.704** RF RSD **4.65** AVE RT **5.25**

2,2-Dichloropropane

Curve Fit: **AVERAGE RF**

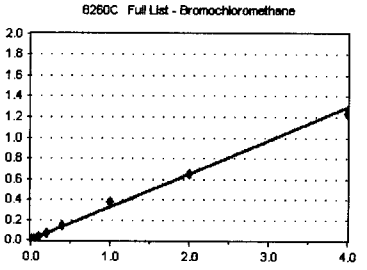


Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL4	1	2775	0.654	5.36
9F20044-CAL5	2	5539	0.669	5.36
9F20044-CAL6	5	13609	0.647	5.36
9F20044-CAL7	10	29277	0.702	5.36
9F20044-CAL8	20	58610	0.692	5.36
9F20044-CAL9	50	148380	0.730	5.36
9F20044-CALA	100	285471	0.664	5.36
9F20044-CALB	200	554747	0.679	5.36

AVE RF **0.679** RF RSD **4.04** AVE RT **5.36**

Bromochloromethane

Curve Fit: **AVERAGE RF**

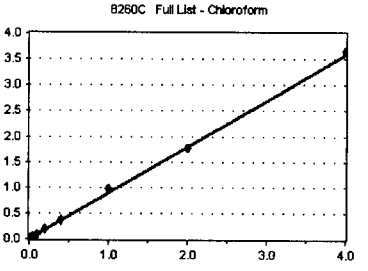


Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL3	0.4	437	0.253	5.45
9F20044-CAL4	1	1297	0.306	5.45
9F20044-CAL5	2	2660	0.321	5.45
9F20044-CAL6	5	7111	0.338	5.46
9F20044-CAL7	10	14538	0.348	5.45
9F20044-CAL8	20	29415	0.347	5.45
9F20044-CAL9	50	76222	0.375	5.45
9F20044-CALA	100	140204	0.326	5.46
9F20044-CALB	200	252303	0.309	5.45

AVE RF **0.325** RF RSD **10.66** AVE RT **5.45**

Chloroform

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL3	0.4	1469	0.849	5.54
9F20044-CAL4	1	3614	0.852	5.53
9F20044-CAL5	2	7377	0.890	5.53
9F20044-CAL6	5	18377	0.873	5.54
9F20044-CAL7	10	38632	0.926	5.54
9F20044-CAL8	20	77689	0.917	5.53
9F20044-CAL9	50	197721	0.972	5.54
9F20044-CALA	100	381891	0.888	5.54
9F20044-CALB	200	746862	0.914	5.53

AVE RF **0.898** RF RSD **4.36** AVE RT **5.53**

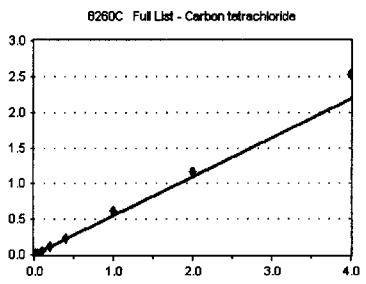
Element Calibration Review Sheet

Calibration ID: **A9F2102** Instrument: **VOA-GCMS9** Calibration Date: **06/21/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VI190621W+.M VI190621G.I**

Carbon tetrachloride

Curve Fit: **AVERAGE RF**

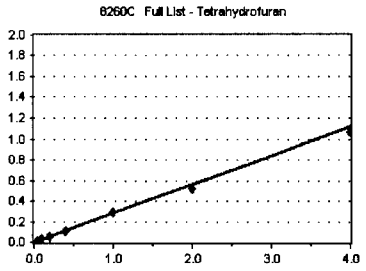


Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL3~~	~~0.4~~	~~643~~	~~0.372~~	~~5.67~~
9F20044-CAL4	1	2061	0.486	5.66
9F20044-CAL5	2	4035	0.487	5.67
9F20044-CAL6	5	10336	0.491	5.67
9F20044-CAL7	10	22754	0.545	5.67
9F20044-CAL8	20	46960	0.554	5.66
9F20044-CAL9	50	124688	0.613	5.67
9F20044-CALA	100	251247	0.584	5.67
9F20044-CALB	200	516185	0.632	5.66

AVE RF **0.549** RF RSD **10.55** AVE RT **5.67**

Tetrahydrofuran

Curve Fit: **AVERAGE RF**

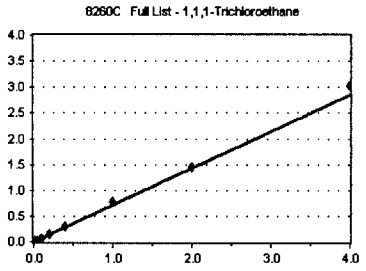


Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL4~~	~~1~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL5	2	2546	0.307	5.71
9F20044-CAL6	5	6018	0.286	5.71
9F20044-CAL7	10	11859	0.284	5.71
9F20044-CAL8	20	22966	0.271	5.71
9F20044-CAL9	50	59864	0.294	5.70
9F20044-CALA	100	112665	0.262	5.71
9F20044-CALB	200	218470	0.267	5.70

AVE RF **0.282** RF RSD **5.70** AVE RT **5.71**

1,1,1-Trichloroethane

Curve Fit: **AVERAGE RF**

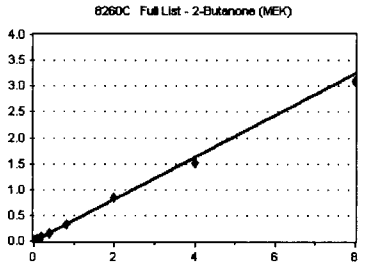


Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL3	0.4	1087	0.628	5.74
9F20044-CAL4	1	3002	0.707	5.74
9F20044-CAL5	2	5613	0.678	5.74
9F20044-CAL6	5	14420	0.685	5.74
9F20044-CAL7	10	30675	0.735	5.74
9F20044-CAL8	20	62914	0.743	5.74
9F20044-CAL9	50	159643	0.785	5.74
9F20044-CALA	100	311653	0.724	5.74
9F20044-CALB	200	617180	0.756	5.74

AVE RF **0.716** RF RSD **6.57** AVE RT **5.74**

2-Butanone (MEK)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL2~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL3~~	~~0.8~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL4	2	3724	0.439	5.87
9F20044-CAL5	4	7000	0.422	5.87
9F20044-CAL6	10	16551	0.393	5.86
9F20044-CAL7	20	33398	0.400	5.86
9F20044-CAL8	40	68176	0.402	5.86
9F20044-CAL9	100	172204	0.423	5.86
9F20044-CALA	200	323609	0.376	5.86
9F20044-CALB	400	633397	0.388	5.86

AVE RF **0.406** RF RSD **5.18** AVE RT **5.86**

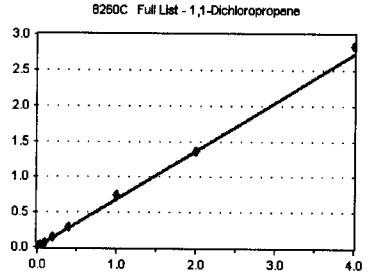
Element Calibration Review Sheet

Calibration ID: **A9F2102** Instrument: **VOA-GCMS9** Calibration Date: **06/21/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VI190621W+.M VI190621G.I**

1,1-Dichloropropene

Curve Fit: **AVERAGE RF**

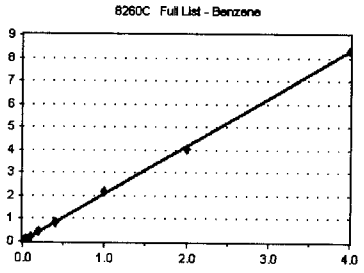


Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL3	0.4	1102	0.637	5.87
9F20044-CAL4	1	2702	0.637	5.88
9F20044-CAL5	2	5432	0.656	5.86
9F20044-CAL6	5	13797	0.655	5.87
9F20044-CAL7	10	29419	0.705	5.87
9F20044-CAL8	20	60592	0.715	5.86
9F20044-CAL9	50	151196	0.743	5.87
9F20044-CALA	100	293441	0.682	5.87
9F20044-CALB	200	579299	0.709	5.86

AVE RF **0.682** RF RSD **5.59** AVE RT **5.87**

Benzene

Curve Fit: **AVERAGE RF**

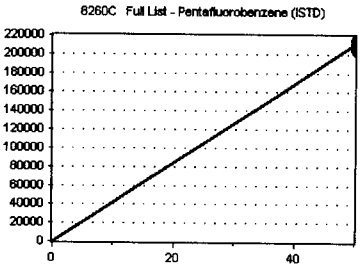


Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL2	0.2	1868	2.177	6.13
9F20044-CAL3	0.4	3614	2.088	6.13
9F20044-CAL4	1	8486	2.000	6.13
9F20044-CAL5	2	16870	2.036	6.13
9F20044-CAL6	5	42655	2.027	6.13
9F20044-CAL7	10	89017	2.133	6.13
9F20044-CAL8	20	177855	2.099	6.13
9F20044-CAL9	50	445865	2.193	6.13
9F20044-CALA	100	869915	2.022	6.13
9F20044-CALB	200	1701439	2.083	6.13

AVE RF **2.086** RF RSD **3.18** AVE RT **6.13**

Pentafluorobenzene (ISTD)

Curve Fit: **AVERAGE RF**

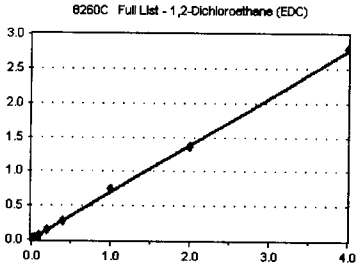


Standard	Concentration	Response	Response Factor	RT
9F20044-CAL1	50	216252	4325.040	6.22
9F20044-CAL2	50	214495	4289.900	6.22
9F20044-CAL3	50	216322	4326.440	6.22
9F20044-CAL4	50	212184	4243.680	6.22
9F20044-CAL5	50	207120	4142.400	6.22
9F20044-CAL6	50	210483	4209.660	6.22
9F20044-CAL7	50	208672	4173.440	6.22
9F20044-CAL8	50	211811	4236.220	6.22
9F20044-CAL9	50	203359	4067.180	6.22
9F20044-CALA	50	215096	4301.920	6.22
9F20044-CALB	50	204201	4084.020	6.22

AVE RF **4218.173** RF RSD **2.18** AVE RT **6.22**

1,2-Dichloroethane (EDC)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL3	0.4	1039	0.600	6.35
9F20044-CAL4	1	2943	0.694	6.35
9F20044-CAL5	2	5701	0.688	6.35
9F20044-CAL6	5	14313	0.680	6.35
9F20044-CAL7	10	29731	0.712	6.35
9F20044-CAL8	20	59444	0.702	6.35
9F20044-CAL9	50	151724	0.746	6.35
9F20044-CALA	100	291619	0.678	6.35
9F20044-CALB	200	569728	0.698	6.34

AVE RF **0.689** RF RSD **5.65** AVE RT **6.35**

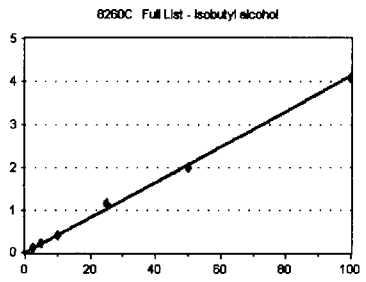
Element Calibration Review Sheet

Calibration ID: **A9F2102** Instrument: **VOA-GCMS9** Calibration Date: **06/21/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VI190621W+.M VI190621G.I**

Isobutyl alcohol

Curve Fit: **AVERAGE RF**

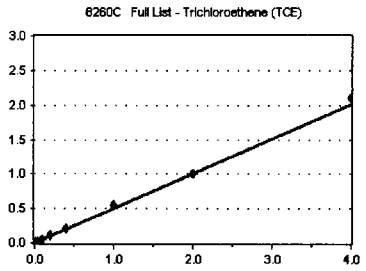


Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~2.5~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL2~~	~~5~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL3~~	~~10~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL4~~	~~25~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL5~~	~~50~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL6	125	20716	0.039	6.38
9F20044-CAL7	250	42610	4.084	6.38
9F20044-CAL8	500	87748	0.041	6.38
9F20044-CAL9	1250	234023	0.046	6.38
9F20044-CALA	2500	428089	3.980	6.38
9F20044-CALB	5000	833289	4.081	6.38

AVE RF **4.138** RF RSD **5.80** AVE RT **6.38**

Trichloroethene (TCE)

Curve Fit: **AVERAGE RF**

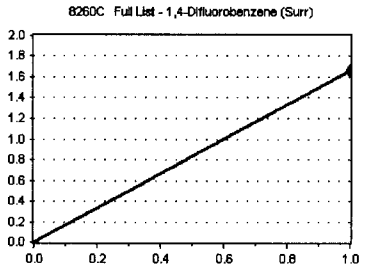


Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL3	0.4	770	0.445	6.75
9F20044-CAL4	1	2094	0.493	6.75
9F20044-CAL5	2	3971	0.479	6.75
9F20044-CAL6	5	10321	0.490	6.75
9F20044-CAL7	10	22223	0.532	6.75
9F20044-CAL8	20	44514	0.525	6.75
9F20044-CAL9	50	110584	0.544	6.75
9F20044-CALA	100	217794	0.506	6.75
9F20044-CALB	200	429061	0.525	6.75

AVE RF **0.505** RF RSD **6.15** AVE RT **6.75**

1,4-Difluorobenzene (Surr)

Curve Fit: **AVERAGE RF**

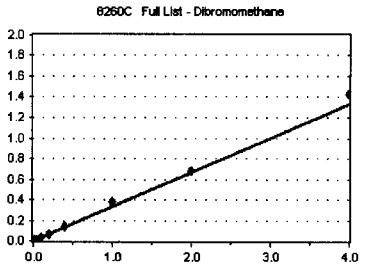


Standard	Concentration	Response	Response Factor	RT
9F20044-CAL1	50	358207	1.656	6.79
9F20044-CAL2	50	352562	1.644	6.78
9F20044-CAL3	50	354384	1.638	6.79
9F20044-CAL4	50	356332	1.679	6.79
9F20044-CAL5	50	346645	1.674	6.79
9F20044-CAL6	50	351357	1.669	6.79
9F20044-CAL7	50	346503	1.661	6.79
9F20044-CAL8	50	352468	1.664	6.79
9F20044-CAL9	50	340921	1.676	6.79
9F20044-CALA	50	358617	1.667	6.79
9F20044-CALB	50	342426	1.677	6.79

AVE RF **1.664** RF RSD **0.81** AVE RT **6.79**

Dibromomethane

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL3	0.4	433	0.250	7.21
9F20044-CAL4	1	1305	0.308	7.20
9F20044-CAL5	2	2728	0.329	7.20
9F20044-CAL6	5	6909	0.328	7.21
9F20044-CAL7	10	14550	0.349	7.20
9F20044-CAL8	20	29571	0.349	7.20
9F20044-CAL9	50	76074	0.374	7.20
9F20044-CALA	100	147484	0.343	7.21
9F20044-CALB	200	291580	0.357	7.20

AVE RF **0.332** RF RSD **10.86** AVE RT **7.20**

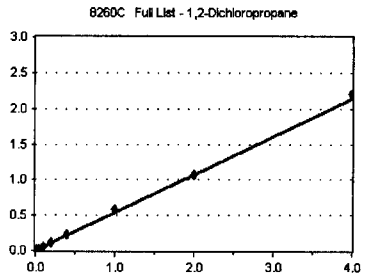
Element Calibration Review Sheet

Calibration ID: **A9F2102** Instrument: **VOA-GCMS9** Calibration Date: **06/21/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VI190621W+.M VI190621G.I**

1,2-Dichloropropane

Curve Fit: **AVERAGE RF**

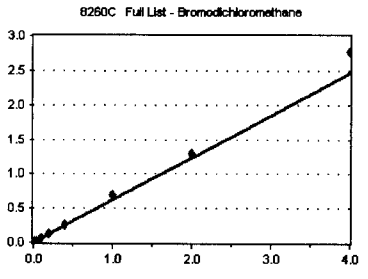


Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL3	0.4	812	0.469	7.31
9F20044-CAL4	1	2194	0.517	7.31
9F20044-CAL5	2	4334	0.523	7.32
9F20044-CAL6	5	11150	0.530	7.32
9F20044-CAL7	10	23246	0.557	7.32
9F20044-CAL8	20	46799	0.552	7.32
9F20044-CAL9	50	117196	0.576	7.31
9F20044-CALA	100	229097	0.533	7.32
9F20044-CALB	200	449560	0.550	7.31

AVE RF **0.534** RF RSD **5.75** AVE RT **7.32**

Bromodichloromethane

Curve Fit: **AVERAGE RF**

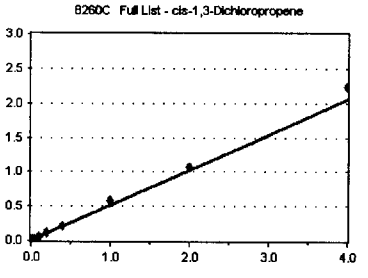


Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL3	0.4	949	0.548	7.39
9F20044-CAL4	1	2265	0.534	7.39
9F20044-CAL5	2	4841	0.584	7.39
9F20044-CAL6	5	12311	0.585	7.39
9F20044-CAL7	10	26103	0.625	7.39
9F20044-CAL8	20	53614	0.633	7.39
9F20044-CAL9	50	141449	0.696	7.39
9F20044-CALA	100	279539	0.650	7.39
9F20044-CALB	200	565142	0.692	7.39

AVE RF **0.616** RF RSD **9.41** AVE RT **7.39**

cis-1,3-Dichloropropene

Curve Fit: **AVERAGE RF**

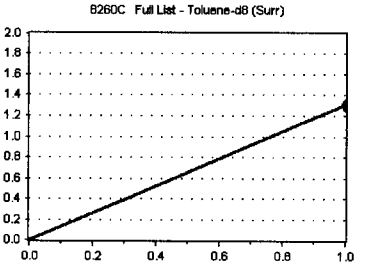


Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL3	0.4	1097	0.425	8.10
9F20044-CAL4	1	3024	0.471	8.10
9F20044-CAL5	2	6162	0.495	8.10
9F20044-CAL6	5	15503	0.488	8.10
9F20044-CAL7	10	33223	0.537	8.10
9F20044-CAL8	20	67880	0.528	8.10
9F20044-CAL9	50	179241	0.580	8.10
9F20044-CALA	100	350611	0.536	8.10
9F20044-CALB	200	697644	0.561	8.10

AVE RF **0.514** RF RSD **9.38** AVE RT **8.10**

Toluene-d8 (Surr)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9F20044-CAL1	50	419867	1.314	8.30
9F20044-CAL2	50	416463	1.320	8.30
9F20044-CAL3	50	421971	1.309	8.30
9F20044-CAL4	50	417568	1.300	8.30
9F20044-CAL5	50	408908	1.314	8.30
9F20044-CAL6	50	413565	1.302	8.30
9F20044-CAL7	50	406176	1.314	8.30
9F20044-CAL8	50	416334	1.296	8.30
9F20044-CAL9	50	405204	1.312	8.30
9F20044-CALA	50	420397	1.286	8.30
9F20044-CALB	50	405261	1.304	8.30

AVE RF **1.306** RF RSD **0.76** AVE RT **8.30**

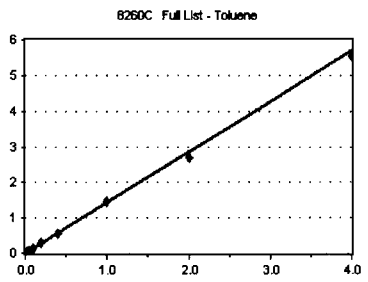
Element Calibration Review Sheet

Calibration ID: **A9F2102** Instrument: **VOA-GCMS9** Calibration Date: **06/21/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VI190621W+.M VI190621G.I**

Toluene

Curve Fit: **AVERAGE RF**

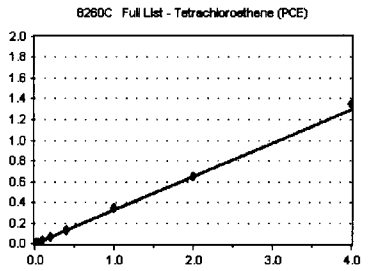


Standard	Concentration	Response	Response Factor	RT
9F20044-CAL1	0.1	1033	1.616	8.36
9F20044-CAL2	0.2	1910	1.514	8.36
9F20044-CAL3	0.4	3651	1.416	8.36
9F20044-CAL4	1	8763	1.364	8.36
9F20044-CAL5	2	17144	1.377	8.36
9F20044-CAL6	5	42182	1.328	8.36
9F20044-CAL7	10	89825	1.453	8.36
9F20044-CAL8	20	182138	1.417	8.36
9F20044-CAL9	50	453767	1.469	8.36
9F20044-CALA	100	880744	1.347	8.36
9F20044-CALB	200	1725149	1.388	8.36

AVE RF **1.426** RF RSD **5.87** AVE RT **8.36**

Tetrachloroethene (PCE)

Curve Fit: **AVERAGE RF**

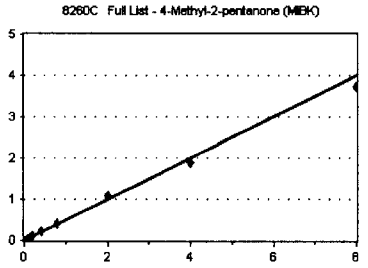


Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL3	0.4	702	0.272	8.81
9F20044-CAL4	1	2059	0.321	8.80
9F20044-CAL5	2	3980	0.320	8.80
9F20044-CAL6	5	10061	0.317	8.80
9F20044-CAL7	10	21224	0.343	8.80
9F20044-CAL8	20	43326	0.337	8.80
9F20044-CAL9	50	106928	0.346	8.80
9F20044-CALA	100	211071	0.323	8.80
9F20044-CALB	200	419348	0.337	8.80

AVE RF **0.324** RF RSD **6.88** AVE RT **8.80**

4-Methyl-2-pentanone (MiBK)

Curve Fit: **AVERAGE RF**

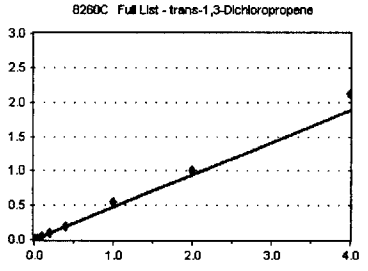


Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL2~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL3~~	~~0.8~~	~~2659~~	~~0.516~~	~~8.82~~
~~9F20044-CAL4~~	~~2~~	~~6582~~	~~0.512~~	~~8.81~~
9F20044-CAL5	4	12326	0.495	8.81
9F20044-CAL6	10	31812	0.501	8.81
9F20044-CAL7	20	63594	0.514	8.80
9F20044-CAL8	40	131182	0.510	8.80
9F20044-CAL9	100	334688	0.542	8.80
9F20044-CALA	200	616521	0.471	8.80
9F20044-CALB	400	1160712	0.467	8.80

AVE RF **0.500** RF RSD **5.16** AVE RT **8.80**

trans-1,3-Dichloropropene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL3	0.4	1047	0.406	8.85
9F20044-CAL4	1	2700	0.420	8.85
9F20044-CAL5	2	5224	0.420	8.85
9F20044-CAL6	5	13846	0.436	8.85
9F20044-CAL7	10	29864	0.483	8.85
9F20044-CAL8	20	62988	0.490	8.84
9F20044-CAL9	50	168385	0.545	8.85
9F20044-CALA	100	328804	0.503	8.85
9F20044-CALB	200	658211	0.529	8.84

AVE RF **0.470** RF RSD **10.91** AVE RT **8.84**

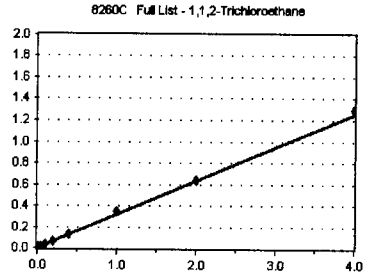
Element Calibration Review Sheet

Calibration ID: **A9F2102** Instrument: **VOA-GCMS9** Calibration Date: **06/21/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VI190621W+.M VI190621G.I**

1,1,2-Trichloroethane

Curve Fit: **AVERAGE RF**

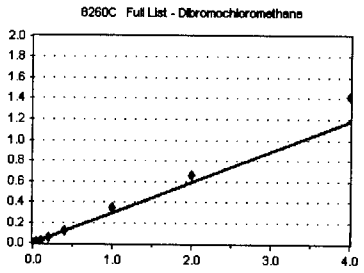


Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL3	0.4	686	0.266	9.01
9F20044-CAL4	1	1850	0.288	9.02
9F20044-CAL5	2	3923	0.315	9.02
9F20044-CAL6	5	9783	0.308	9.01
9F20044-CAL7	10	20793	0.336	9.02
9F20044-CAL8	20	42325	0.329	9.01
9F20044-CAL9	50	107199	0.347	9.01
9F20044-CALA	100	208022	0.318	9.02
9F20044-CALB	200	402284	0.324	9.01

AVE RF **0.315** RF RSD **7.89** AVE RT **9.01**

Dibromochloromethane

Curve Fit: **AVERAGE RF**

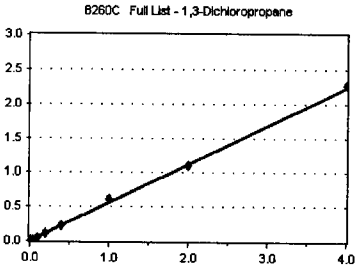


Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL3~~	~~0.4~~	~~565~~	~~0.219~~	~~9.19~~
9F20044-CAL4	1	1527	0.238	9.20
9F20044-CAL5	2	3080	0.247	9.19
9F20044-CAL6	5	8356	0.263	9.19
9F20044-CAL7	10	17821	0.288	9.19
9F20044-CAL8	20	38368	0.299	9.19
9F20044-CAL9	50	105586	0.342	9.19
9F20044-CALA	100	215589	0.330	9.19
9F20044-CALB	200	439963	0.354	9.19

AVE RF **0.295** RF RSD **14.87** AVE RT **9.19**

1,3-Dichloropropane

Curve Fit: **AVERAGE RF**

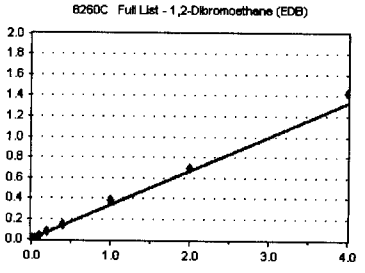


Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL3	0.4	1270	0.493	9.30
9F20044-CAL4	1	3534	0.550	9.30
9F20044-CAL5	2	6955	0.559	9.30
9F20044-CAL6	5	17813	0.561	9.30
9F20044-CAL7	10	36030	0.583	9.30
9F20044-CAL8	20	73700	0.573	9.30
9F20044-CAL9	50	188838	0.611	9.30
9F20044-CALA	100	360265	0.551	9.30
9F20044-CALB	200	703363	0.566	9.30

AVE RF **0.561** RF RSD **5.67** AVE RT **9.30**

1,2-Dibromoethane (EDB)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL2	0.2	297	0.235	9.44
9F20044-CAL3	0.4	766	0.297	9.44
9F20044-CAL4	1	2008	0.313	9.43
9F20044-CAL5	2	4093	0.329	9.44
9F20044-CAL6	5	10703	0.337	9.43
9F20044-CAL7	10	22272	0.360	9.43
9F20044-CAL8	20	45760	0.356	9.43
9F20044-CAL9	50	117678	0.381	9.43
9F20044-CALA	100	227284	0.348	9.43
9F20044-CALB	200	444681	0.358	9.43

AVE RF **0.331** RF RSD **12.58** AVE RT **9.43**

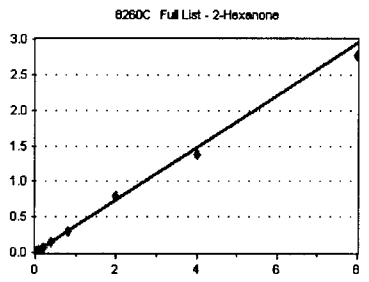
Element Calibration Review Sheet

Calibration ID: **A9F2102** Instrument: **VOA-GCMS9** Calibration Date: **06/21/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VI190621W+.M VI190621G.I**

2-Hexanone

Curve Fit: **AVERAGE RF**

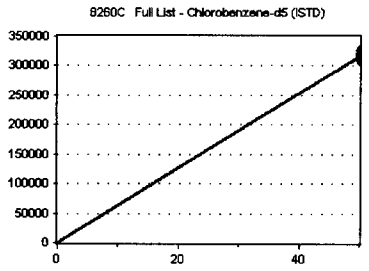


Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL2~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL3	0.8	1999	0.388	9.67
9F20044-CAL4	2	4754	0.370	9.66
9F20044-CAL5	4	8923	0.358	9.66
9F20044-CAL6	10	22445	0.353	9.66
9F20044-CAL7	20	47165	0.381	9.66
9F20044-CAL8	40	95510	0.372	9.66
9F20044-CAL9	100	246411	0.399	9.66
9F20044-CALA	200	451887	0.346	9.66
9F20044-CALB	400	863303	0.347	9.66

AVE RF **0.368** RF RSD **5.06** AVE RT **9.66**

Chlorobenzene-d5 (ISTD)

Curve Fit: **AVERAGE RF**

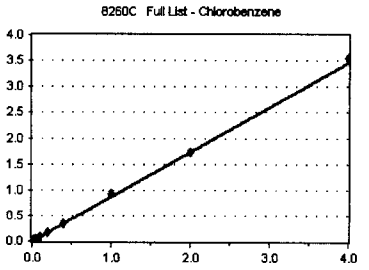


Standard	Concentration	Response	Response Factor	RT
9F20044-CAL1	50	319588	6391.760	9.92
9F20044-CAL2	50	315477	6309.540	9.92
9F20044-CAL3	50	322309	6446.180	9.92
9F20044-CAL4	50	321130	6422.600	9.92
9F20044-CAL5	50	311234	6224.680	9.92
9F20044-CAL6	50	317560	6351.200	9.92
9F20044-CAL7	50	309194	6183.880	9.92
9F20044-CAL8	50	321290	6425.800	9.92
9F20044-CAL9	50	308920	6178.400	9.92
9F20044-CALA	50	326979	6539.580	9.92
9F20044-CALB	50	310773	6215.460	9.92

AVE RF **6335.371** RF RSD **1.92** AVE RT **9.92**

Chlorobenzene

Curve Fit: **AVERAGE RF**

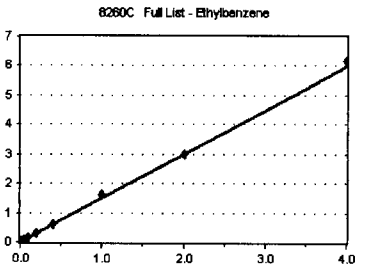


Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL2	0.2	1008	0.799	9.93
9F20044-CAL3	0.4	2135	0.828	9.93
9F20044-CAL4	1	5419	0.844	9.93
9F20044-CAL5	2	10769	0.865	9.93
9F20044-CAL6	5	27201	0.857	9.93
9F20044-CAL7	10	56373	0.912	9.93
9F20044-CAL8	20	114554	0.891	9.93
9F20044-CAL9	50	287748	0.931	9.93
9F20044-CALA	100	563709	0.862	9.93
9F20044-CALB	200	1098798	0.884	9.93

AVE RF **0.867** RF RSD **4.53** AVE RT **9.93**

Ethylbenzene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9F20044-CAL1	0.1	867	1.356	9.96
9F20044-CAL2	0.2	1959	1.552	9.96
9F20044-CAL3	0.4	3623	1.405	9.96
9F20044-CAL4	1	9234	1.438	9.96
9F20044-CAL5	2	17924	1.440	9.96
9F20044-CAL6	5	46640	1.469	9.96
9F20044-CAL7	10	97148	1.571	9.96
9F20044-CAL8	20	199043	1.549	9.96
9F20044-CAL9	50	500499	1.620	9.96
9F20044-CALA	100	976571	1.493	9.96
9F20044-CALB	200	1912618	1.539	9.96

AVE RF **1.494** RF RSD **5.35** AVE RT **9.96**

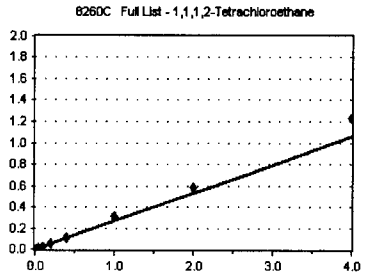
Element Calibration Review Sheet

Calibration ID: **A9F2102** Instrument: **VOA-GCMS9** Calibration Date: **06/21/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VI190621W+.M VI190621G.I**

1,1,1,2-Tetrachloroethane

Curve Fit: **AVERAGE RF**

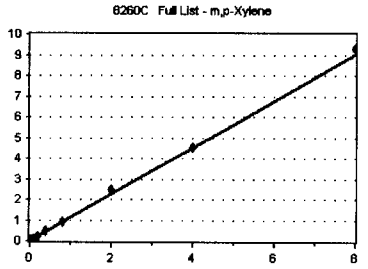


Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL2~~	~~0.2~~	~~225~~	~~0.178~~	~~10.00~~
9F20044-CAL3	0.4	526	0.204	10.00
9F20044-CAL4	1	1352	0.211	9.99
9F20044-CAL5	2	3145	0.253	10.00
9F20044-CAL6	5	7859	0.247	10.00
9F20044-CAL7	10	17145	0.277	10.00
9F20044-CAL8	20	36071	0.281	10.00
9F20044-CAL9	50	95349	0.309	10.00
9F20044-CALA	100	191370	0.293	10.00
9F20044-CALB	200	384611	0.309	10.00

AVE RF **0.265** RF RSD **14.74** AVE RT **9.99**

m,p-Xylene

Curve Fit: **AVERAGE RF**

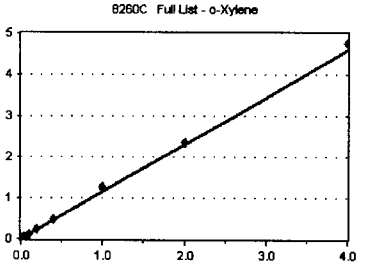


Standard	Concentration	Response	Response Factor	RT
9F20044-CAL1	0.2	1349	1.055	10.09
9F20044-CAL2	0.4	2948	1.168	10.09
9F20044-CAL3	0.8	5389	1.045	10.09
9F20044-CAL4	2	13780	1.073	10.09
9F20044-CAL5	4	26844	1.078	10.09
9F20044-CAL6	10	69099	1.088	10.09
9F20044-CAL7	20	146011	1.181	10.09
9F20044-CAL8	40	297370	1.157	10.09
9F20044-CAL9	100	761093	1.232	10.09
9F20044-CALA	200	1487683	1.137	10.09
9F20044-CALB	400	2895454	1.165	10.09

AVE RF **1.125** RF RSD **5.38** AVE RT **10.09**

o-Xylene

Curve Fit: **AVERAGE RF**

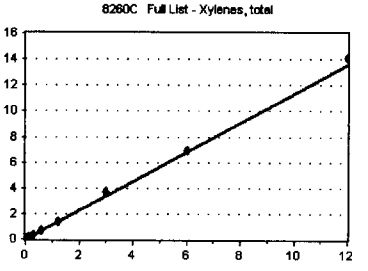


Standard	Concentration	Response	Response Factor	RT
9F20044-CAL1	0.1	703	1.100	10.48
9F20044-CAL2	0.2	1371	1.086	10.48
9F20044-CAL3	0.4	2671	1.036	10.48
9F20044-CAL4	1	6999	1.090	10.47
9F20044-CAL5	2	14152	1.137	10.47
9F20044-CAL6	5	35226	1.109	10.47
9F20044-CAL7	10	75737	1.225	10.47
9F20044-CAL8	20	154063	1.199	10.47
9F20044-CAL9	50	393871	1.275	10.47
9F20044-CALA	100	764933	1.170	10.47
9F20044-CALB	200	1481357	1.192	10.47

AVE RF **1.147** RF RSD **6.21** AVE RT **10.47**

Xylenes, total

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9F20044-CAL1	0.3	2052	1.070	10.48
9F20044-CAL2	0.6	4319	1.141	10.48
9F20044-CAL3	1.2	8060	1.042	10.48
9F20044-CAL4	3	20779	1.078	10.47
9F20044-CAL5	6	40996	1.098	10.47
9F20044-CAL6	15	104325	1.095	10.47
9F20044-CAL7	30	221748	1.195	10.47
9F20044-CAL8	60	451433	1.171	10.47
9F20044-CAL9	150	1154964	1.246	10.47
9F20044-CALA	300	2252616	1.148	10.47
9F20044-CALB	600	4376811	1.174	10.47

AVE RF **1.133** RF RSD **5.44** AVE RT **10.47**

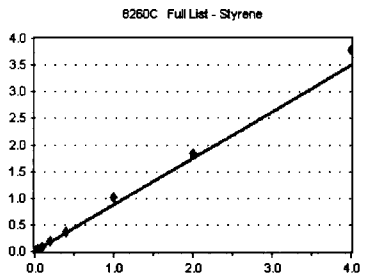
Element Calibration Review Sheet

Calibration ID: **A9F2102** Instrument: **VOA-GCMS9** Calibration Date: **06/21/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VI190621W+.M VI190621G.I**

Styrene

Curve Fit: **AVERAGE RF**

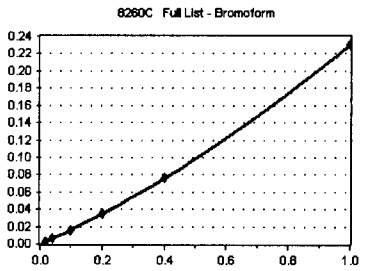


Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL2	0.2	998	0.791	10.52
9F20044-CAL3	0.4	1902	0.738	10.52
9F20044-CAL4	1	5129	0.799	10.52
9F20044-CAL5	2	10275	0.825	10.52
9F20044-CAL6	5	26982	0.850	10.52
9F20044-CAL7	10	58587	0.947	10.52
9F20044-CAL8	20	120508	0.938	10.52
9F20044-CAL9	50	310680	1.006	10.52
9F20044-CALA	100	603050	0.922	10.52
9F20044-CALB	200	1179064	0.948	10.52

AVE RF **0.876** RF RSD **9.97** AVE RT **10.52**

Bromoform

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

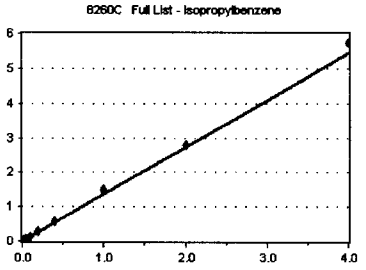


Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL4	1	864	0.135	10.55
9F20044-CAL5	2	1903	0.153	10.54
9F20044-CAL6	5	5086	0.160	10.54
9F20044-CAL7	10	10720	0.173	10.54
9F20044-CAL8	20	24635	0.192	10.54
9F20044-CAL9	50	71192	0.230	10.54
~~9F20044-CALA~~	~~100~~	~~146715~~	~~0.224~~	~~10.54~~
~~9F20044-CALB~~	~~200~~	~~304762~~	~~0.245~~	~~10.54~~

AVE RF **0.174** RF RSD **19.42** AVE RT **10.54**

Isopropylbenzene

Curve Fit: **AVERAGE RF**

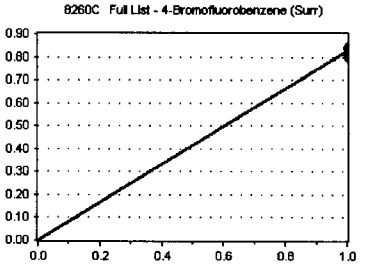


Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL2	0.2	1594	1.263	10.74
9F20044-CAL3	0.4	3170	1.229	10.74
9F20044-CAL4	1	8025	1.249	10.74
9F20044-CAL5	2	16331	1.312	10.74
9F20044-CAL6	5	41584	1.309	10.74
9F20044-CAL7	10	90064	1.456	10.74
9F20044-CAL8	20	183642	1.429	10.74
9F20044-CAL9	50	464969	1.505	10.74
9F20044-CALA	100	915044	1.399	10.74
9F20044-CALB	200	1780791	1.433	10.74

AVE RF **1.359** RF RSD **7.17** AVE RT **10.74**

4-Bromofluorobenzene (Surr)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9F20044-CAL1	50	122172	0.846	10.98
9F20044-CAL2	50	119949	0.839	10.98
9F20044-CAL3	50	123411	0.838	10.98
9F20044-CAL4	50	121837	0.836	10.98
9F20044-CAL5	50	118488	0.834	10.98
9F20044-CAL6	50	122376	0.833	10.98
9F20044-CAL7	50	120665	0.839	10.98
9F20044-CAL8	50	126396	0.824	10.98
9F20044-CAL9	50	122539	0.813	10.98
9F20044-CALA	50	127873	0.809	10.98
9F20044-CALB	50	118374	0.800	10.98

AVE RF **0.828** RF RSD **1.79** AVE RT **10.98**

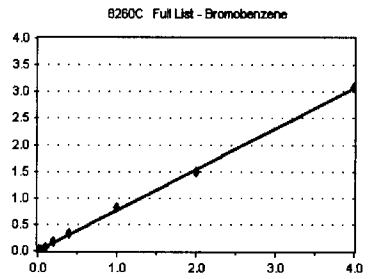
Element Calibration Review Sheet

Calibration ID: **A9F2102** Instrument: **VOA-GCMS9** Calibration Date: **06/21/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VI190621W+.M VI190621G.I**

Bromobenzene

Curve Fit: **AVERAGE RF**

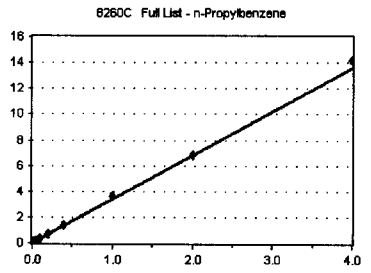


Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL2	0.2	406	0.710	11.06
9F20044-CAL3	0.4	864	0.734	11.07
9F20044-CAL4	1	2205	0.757	11.06
9F20044-CAL5	2	4450	0.783	11.07
9F20044-CAL6	5	10912	0.743	11.07
9F20044-CAL7	10	23575	0.820	11.07
9F20044-CAL8	20	48339	0.788	11.07
9F20044-CAL9	50	122510	0.813	11.07
9F20044-CALA	100	235375	0.744	11.07
9F20044-CALB	200	457253	0.773	11.06

AVE RF **0.766** RF RSD **4.61** AVE RT **11.06**

n-Propylbenzene

Curve Fit: **AVERAGE RF**

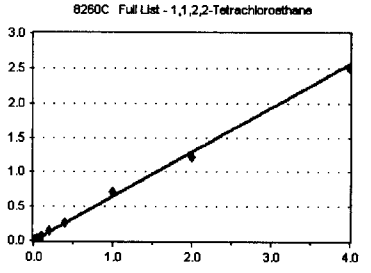


Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL2	0.2	1849	3.231	11.08
9F20044-CAL3	0.4	3601	3.058	11.08
9F20044-CAL4	1	9689	3.326	11.08
9F20044-CAL5	2	18778	3.305	11.08
9F20044-CAL6	5	48510	3.303	11.08
9F20044-CAL7	10	105162	3.657	11.08
9F20044-CAL8	20	216830	3.533	11.08
9F20044-CAL9	50	552123	3.664	11.08
9F20044-CALA	100	1076928	3.406	11.08
9F20044-CALB	200	2100401	3.549	11.08

AVE RF **3.403** RF RSD **5.76** AVE RT **11.08**

1,1,2,2-Tetrachloroethane

Curve Fit: **AVERAGE RF**

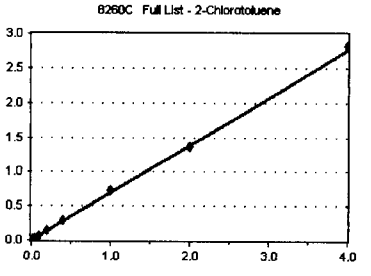


Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL2	0.2	327	0.571	11.15
9F20044-CAL3	0.4	707	0.600	11.15
9F20044-CAL4	1	1857	0.637	11.15
9F20044-CAL5	2	3674	0.647	11.15
9F20044-CAL6	5	9734	0.663	11.15
9F20044-CAL7	10	20049	0.697	11.15
9F20044-CAL8	20	40959	0.667	11.15
9F20044-CAL9	50	106308	0.706	11.15
9F20044-CALA	100	191420	0.605	11.15
9F20044-CALB	200	370226	0.626	11.14

AVE RF **0.642** RF RSD **6.68** AVE RT **11.14**

2-Chlorotoluene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL3	0.4	771	0.655	11.21
9F20044-CAL4	1	1852	0.636	11.21
9F20044-CAL5	2	3795	0.668	11.21
9F20044-CAL6	5	9766	0.665	11.21
9F20044-CAL7	10	21062	0.732	11.21
9F20044-CAL8	20	43622	0.711	11.21
9F20044-CAL9	50	110540	0.734	11.21
9F20044-CALA	100	215672	0.682	11.21
9F20044-CALB	200	417067	0.705	11.21

AVE RF **0.687** RF RSD **5.06** AVE RT **11.21**

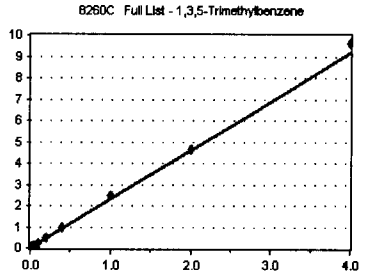
Element Calibration Review Sheet

Calibration ID: **A9F2102** Instrument: **VOA-GCMS9** Calibration Date: **06/21/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VI190621W+.M VI190621G.I**

1,3,5-Trimethylbenzene

Curve Fit: **AVERAGE RF**

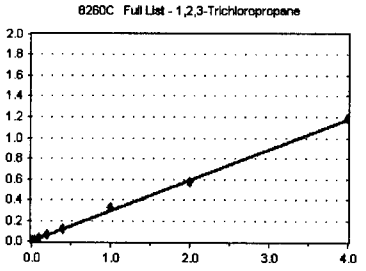


Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL2	0.2	1280	2.237	11.24
9F20044-CAL3	0.4	2531	2.149	11.24
9F20044-CAL4	1	6421	2.204	11.24
9F20044-CAL5	2	12170	2.142	11.24
9F20044-CAL6	5	32548	2.216	11.24
9F20044-CAL7	10	70618	2.456	11.24
9F20044-CAL8	20	146061	2.380	11.24
9F20044-CAL9	50	374460	2.485	11.24
9F20044-CALA	100	734923	2.325	11.24
9F20044-CALB	200	1425435	2.408	11.24

AVE RF **2.300** RF RSD **5.52** AVE RT **11.24**

1,2,3-Trichloropropane

Curve Fit: **AVERAGE RF**

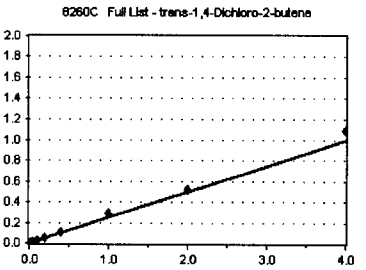


Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL3	0.4	243	0.206	11.25
9F20044-CAL4	1	858	0.294	11.25
9F20044-CAL5	2	1731	0.305	11.25
9F20044-CAL6	5	4458	0.304	11.25
9F20044-CAL7	10	9348	0.325	11.25
9F20044-CAL8	20	19069	0.311	11.25
9F20044-CAL9	50	48655	0.323	11.25
9F20044-CALA	100	91426	0.289	11.25
9F20044-CALB	200	175270	0.296	11.25

AVE RF **0.295** RF RSD **11.99** AVE RT **11.25**

trans-1,4-Dichloro-2-butene

Curve Fit: **AVERAGE RF**

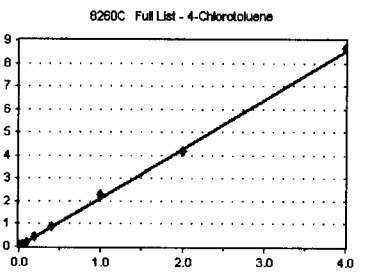


Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL3	0.4	218	0.185	11.29
9F20044-CAL4	1	668	0.229	11.28
9F20044-CAL5	2	1245	0.219	11.29
9F20044-CAL6	5	3644	0.248	11.28
9F20044-CAL7	10	7647	0.266	11.29
9F20044-CAL8	20	16429	0.268	11.29
9F20044-CAL9	50	44053	0.292	11.29
9F20044-CALA	100	81928	0.259	11.29
9F20044-CALB	200	161119	0.272	11.28

AVE RF **0.249** RF RSD **13.12** AVE RT **11.28**

4-Chlorotoluene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL2	0.2	1252	2.188	11.35
9F20044-CAL3	0.4	2288	1.943	11.35
9F20044-CAL4	1	6153	2.112	11.34
9F20044-CAL5	2	11633	2.048	11.34
9F20044-CAL6	5	30340	2.066	11.34
9F20044-CAL7	10	64861	2.256	11.34
9F20044-CAL8	20	134477	2.191	11.34
9F20044-CAL9	50	342004	2.270	11.34
9F20044-CALA	100	657809	2.081	11.34
9F20044-CALB	200	1277794	2.159	11.34

AVE RF **2.131** RF RSD **4.75** AVE RT **11.34**

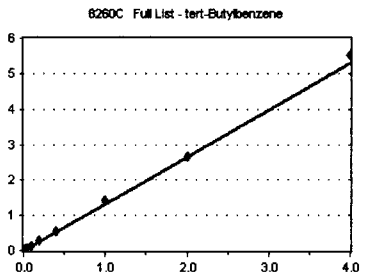
Element Calibration Review Sheet

Calibration ID: **A9F2102** Instrument: **VOA-GCMS9** Calibration Date: **06/21/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VI190621W+.M VI190621G.I**

tert-Butylbenzene

Curve Fit: **AVERAGE RF**

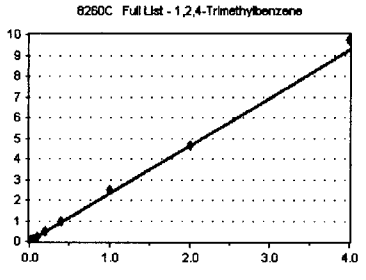


Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL2	0.2	742	1.297	11.49
9F20044-CAL3	0.4	1379	1.171	11.49
9F20044-CAL4	1	3735	1.282	11.49
9F20044-CAL5	2	7529	1.325	11.49
9F20044-CAL6	5	18913	1.288	11.49
9F20044-CAL7	10	40180	1.397	11.49
9F20044-CAL8	20	83942	1.368	11.49
9F20044-CAL9	50	215295	1.429	11.49
9F20044-CALA	100	418585	1.324	11.49
9F20044-CALB	200	813927	1.375	11.49

AVE RF **1.326** RF RSD **5.52** AVE RT **11.49**

1,2,4-Trimethylbenzene

Curve Fit: **AVERAGE RF**

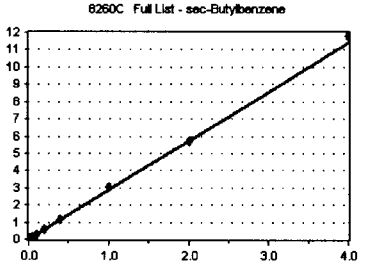


Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL2	0.2	1259	2.200	11.54
9F20044-CAL3	0.4	2364	2.007	11.54
9F20044-CAL4	1	6535	2.243	11.54
9F20044-CAL5	2	12644	2.226	11.54
9F20044-CAL6	5	32738	2.229	11.54
9F20044-CAL7	10	71009	2.470	11.54
9F20044-CAL8	20	147716	2.407	11.54
9F20044-CAL9	50	378562	2.512	11.54
9F20044-CALA	100	737015	2.331	11.54
9F20044-CALB	200	1441707	2.436	11.54

AVE RF **2.306** RF RSD **6.68** AVE RT **11.54**

sec-Butylbenzene

Curve Fit: **AVERAGE RF**

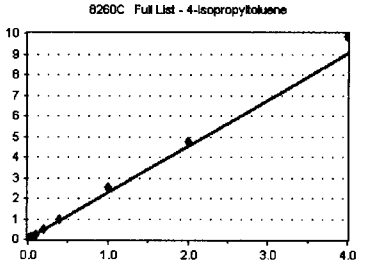


Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL2	0.2	1695	2.962	11.63
9F20044-CAL3	0.4	3002	2.549	11.63
9F20044-CAL4	1	8087	2.776	11.63
9F20044-CAL5	2	15209	2.677	11.63
9F20044-CAL6	5	39995	2.723	11.63
9F20044-CAL7	10	86944	3.024	11.63
9F20044-CAL8	20	180863	2.947	11.63
9F20044-CAL9	50	462445	3.069	11.63
9F20044-CALA	100	901848	2.853	11.63
9F20044-CALB	200	1744647	2.948	11.63

AVE RF **2.853** RF RSD **5.86** AVE RT **11.63**

4-Isopropyltoluene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL2	0.2	1137	1.987	11.73
9F20044-CAL3	0.4	2328	1.977	11.73
9F20044-CAL4	1	6051	2.077	11.73
9F20044-CAL5	2	12207	2.149	11.73
9F20044-CAL6	5	32047	2.182	11.73
9F20044-CAL7	10	69238	2.408	11.73
9F20044-CAL8	20	145889	2.377	11.73
9F20044-CAL9	50	381484	2.532	11.73
9F20044-CALA	100	747978	2.366	11.73
9F20044-CALB	200	1456273	2.460	11.73

AVE RF **2.251** RF RSD **8.97** AVE RT **11.73**

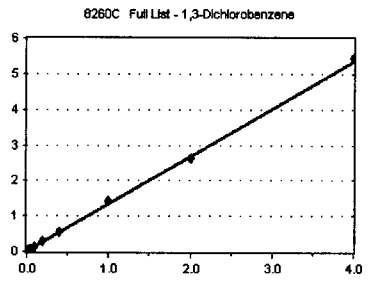
Element Calibration Review Sheet

Calibration ID: **A9F2102** Instrument: **VOA-GCMS9** Calibration Date: **06/21/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VI190621W+.M VI190621G.I**

1,3-Dichlorobenzene

Curve Fit: **AVERAGE RF**

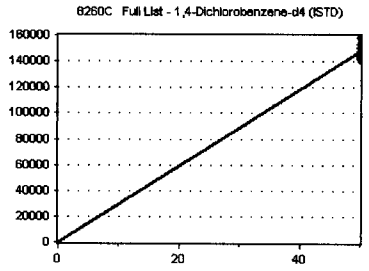


Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL2	0.2	722	1.262	11.80
9F20044-CAL3	0.4	1483	1.259	11.80
9F20044-CAL4	1	3906	1.341	11.80
9F20044-CAL5	2	7534	1.326	11.80
9F20044-CAL6	5	19276	1.312	11.80
9F20044-CAL7	10	40809	1.419	11.80
9F20044-CAL8	20	84752	1.381	11.80
9F20044-CAL9	50	214935	1.426	11.80
9F20044-CALA	100	416625	1.318	11.80
9F20044-CALB	200	808417	1.366	11.80

AVE RF **1.341** RF RSD **4.32** AVE RT **11.80**

1,4-Dichlorobenzene-d4 (ISTD)

Curve Fit: **AVERAGE RF**

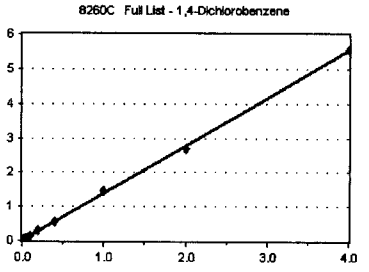


Standard	Concentration	Response	Response Factor	RT
9F20044-CAL1	50	144355	2887.100	11.86
9F20044-CAL2	50	143049	2860.980	11.86
9F20044-CAL3	50	147216	2944.320	11.86
9F20044-CAL4	50	145672	2913.440	11.86
9F20044-CAL5	50	142034	2840.680	11.86
9F20044-CAL6	50	146868	2937.360	11.86
9F20044-CAL7	50	143770	2875.400	11.86
9F20044-CAL8	50	153422	3068.440	11.86
9F20044-CAL9	50	150676	3013.520	11.86
9F20044-CALA	50	158080	3161.600	11.86
9F20044-CALB	50	147969	2959.380	11.86

AVE RF **2951.111** RF RSD **3.28** AVE RT **11.86**

1,4-Dichlorobenzene

Curve Fit: **AVERAGE RF**

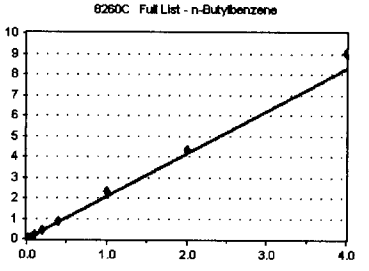


Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL2	0.2	760	1.328	11.87
9F20044-CAL3	0.4	1589	1.349	11.87
9F20044-CAL4	1	4031	1.384	11.87
9F20044-CAL5	2	7885	1.388	11.87
9F20044-CAL6	5	20166	1.373	11.87
9F20044-CAL7	10	41265	1.435	11.87
9F20044-CAL8	20	86143	1.404	11.87
9F20044-CAL9	50	219818	1.459	11.87
9F20044-CALA	100	424379	1.342	11.87
9F20044-CALB	200	818316	1.383	11.87

AVE RF **1.384** RF RSD **2.93** AVE RT **11.87**

n-Butylbenzene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL2	0.2	1025	1.791	12.05
9F20044-CAL3	0.4	2284	1.939	12.05
9F20044-CAL4	1	5420	1.860	12.05
9F20044-CAL5	2	10983	1.933	12.05
9F20044-CAL6	5	29388	2.001	12.05
9F20044-CAL7	10	63502	2.208	12.05
9F20044-CAL8	20	134600	2.193	12.05
9F20044-CAL9	50	347856	2.309	12.05
9F20044-CALA	100	684028	2.164	12.05
9F20044-CALB	200	1332336	2.251	12.05

AVE RF **2.065** RF RSD **8.76** AVE RT **12.05**

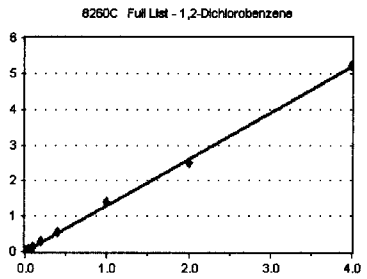
Element Calibration Review Sheet

Calibration ID: **A9F2102** Instrument: **VOA-GCMS9** Calibration Date: **06/21/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VI190621W+.M VI190621G.I**

1,2-Dichlorobenzene

Curve Fit: **AVERAGE RF**

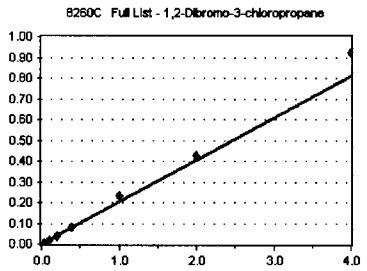


Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL2	0.2	689	1.204	12.19
9F20044-CAL3	0.4	1424	1.209	12.19
9F20044-CAL4	1	3854	1.323	12.19
9F20044-CAL5	2	7242	1.275	12.19
9F20044-CAL6	5	18834	1.282	12.19
9F20044-CAL7	10	39721	1.381	12.19
9F20044-CAL8	20	82461	1.344	12.19
9F20044-CAL9	50	212354	1.409	12.19
9F20044-CALA	100	396257	1.253	12.19
9F20044-CALB	200	774584	1.309	12.19

AVE RF **1.299** RF RSD **5.24** AVE RT **12.19**

1,2-Dibromo-3-chloropropane

Curve Fit: **AVERAGE RF**

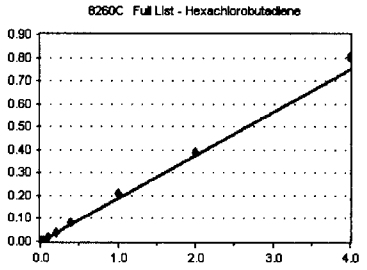


Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL4~~	~~1~~	~~404~~	~~0.139~~	~~12.81~~
9F20044-CAL5	2	981	0.173	12.81
9F20044-CAL6	5	2495	0.170	12.81
9F20044-CAL7	10	5649	0.196	12.81
9F20044-CAL8	20	12521	0.204	12.81
9F20044-CAL9	50	35049	0.233	12.81
9F20044-CALA	100	67160	0.212	12.81
9F20044-CALB	200	136786	0.231	12.81

AVE RF **0.203** RF RSD **12.44** AVE RT **12.81**

Hexachlorobutadiene

Curve Fit: **AVERAGE RF**

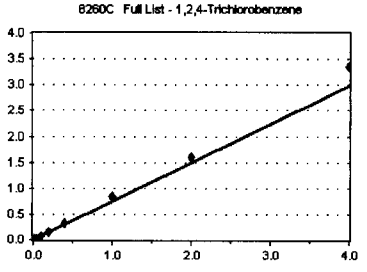


Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL4	1	435	0.149	13.31
9F20044-CAL5	2	934	0.164	13.32
9F20044-CAL6	5	2508	0.171	13.31
9F20044-CAL7	10	5826	0.203	13.31
9F20044-CAL8	20	12574	0.205	13.31
9F20044-CAL9	50	31871	0.212	13.31
9F20044-CALA	100	61323	0.194	13.31
9F20044-CALB	200	118721	0.201	13.31

AVE RF **0.187** RF RSD **12.10** AVE RT **13.31**

1,2,4-Trichlorobenzene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL3	0.4	646	0.549	13.36
9F20044-CAL4	1	1991	0.683	13.35
9F20044-CAL5	2	3993	0.703	13.35
9F20044-CAL6	5	10341	0.704	13.35
9F20044-CAL7	10	22943	0.798	13.35
9F20044-CAL8	20	49011	0.799	13.35
9F20044-CAL9	50	128307	0.852	13.35
9F20044-CALA	100	252382	0.798	13.35
9F20044-CALB	200	496669	0.839	13.35

AVE RF **0.747** RF RSD **12.92** AVE RT **13.35**

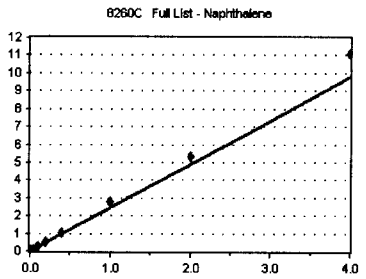
Element Calibration Review Sheet

Calibration ID: **A9F2102** Instrument: **VOA-GCMS9** Calibration Date: **06/21/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VI190621W+.M VI190621G.I**

Naphthalene

Curve Fit: **AVERAGE RF**

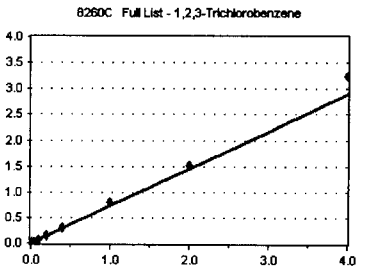


Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL3	0.4	2544	2.160	13.63
9F20044-CAL4	1	6018	2.066	13.63
9F20044-CAL5	2	12353	2.174	13.63
9F20044-CAL6	5	33574	2.286	13.63
9F20044-CAL7	10	72663	2.527	13.63
9F20044-CAL8	20	157738	2.570	13.63
9F20044-CAL9	50	419902	2.787	13.63
9F20044-CALA	100	840999	2.660	13.63
9F20044-CALB	200	1636463	2.765	13.63

AVE RF **2.444** RF RSD **11.31** AVE RT **13.63**

1,2,3-Trichlorobenzene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL3	0.4	669	0.568	13.79
9F20044-CAL4	1	1982	0.680	13.79
9F20044-CAL5	2	3953	0.696	13.79
9F20044-CAL6	5	10056	0.685	13.79
9F20044-CAL7	10	21767	0.757	13.79
9F20044-CAL8	20	46693	0.761	13.79
9F20044-CAL9	50	121910	0.809	13.79
9F20044-CALA	100	240292	0.760	13.79
9F20044-CALB	200	480782	0.812	13.79

AVE RF **0.725** RF RSD **10.61** AVE RT **13.79**

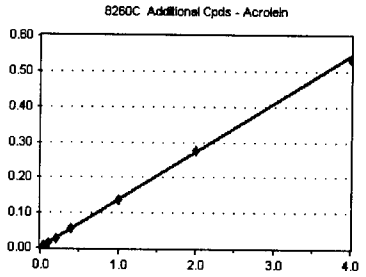
Element Calibration Review Sheet

Calibration ID: **A9F2102** Instrument: **VOA-GCMS9** Calibration Date: **06/21/2019**

Analysis: **8260C Additional Cpds** Instrument Cal ID: **VI190621W+.M VI190621G.I**

Acrolein

Curve Fit: **AVERAGE RF**

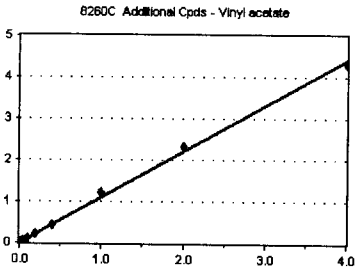


Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL4~~	~~1~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL5	2	1243	0.150	3.63
9F20044-CAL6	5	2633	0.125	3.63
9F20044-CAL7	10	5612	0.134	3.63
9F20044-CAL8	20	11354	0.134	3.63
9F20044-CAL9	50	27909	0.137	3.63
9F20044-CALA	100	59402	0.138	3.63
9F20044-CALB	200	109382	0.134	3.63

AVE RF **0.136** RF RSD **5.47** AVE RT **3.63**

Vinyl acetate

Curve Fit: **AVERAGE RF**

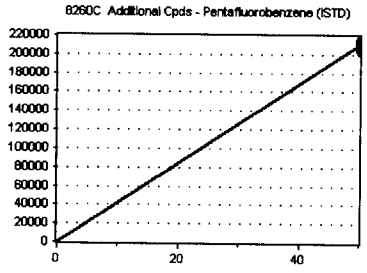


Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL4	1	4452	1.049	4.98
9F20044-CAL5	2	9168	1.107	4.96
9F20044-CAL6	5	23059	1.096	4.96
9F20044-CAL7	10	42948	1.029	4.96
9F20044-CAL8	20	90782	1.071	4.96
9F20044-CAL9	50	245025	1.205	4.96
9F20044-CALA	100	502043	1.167	4.96
9F20044-CALB	200	884370	1.083	4.96

AVE RF **1.101** RF RSD **5.35** AVE RT **4.96**

Pentafluorobenzene (ISTD)

Curve Fit: **AVERAGE RF**

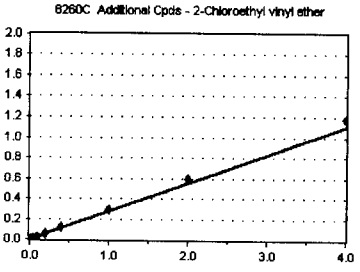


Standard	Concentration	Response	Response Factor	RT
9F20044-CAL1	50	216252	4325.040	6.22
9F20044-CAL2	50	214495	4289.900	6.22
9F20044-CAL3	50	216322	4326.440	6.22
9F20044-CAL4	50	212184	4243.680	6.22
9F20044-CAL5	50	207120	4142.400	6.22
9F20044-CAL6	50	210483	4209.660	6.22
9F20044-CAL7	50	208672	4173.440	6.22
9F20044-CAL8	50	211811	4236.220	6.22
9F20044-CAL9	50	203359	4067.180	6.22
9F20044-CALA	50	215096	4301.920	6.22
9F20044-CALB	50	204201	4084.020	6.22

AVE RF **4218.173** RF RSD **2.18** AVE RT **6.22**

2-Chloroethyl vinyl ether

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL4	1	1514	0.236	8.03
9F20044-CAL5	2	3031	0.243	8.03
9F20044-CAL6	5	8448	0.266	8.03
9F20044-CAL7	10	17440	0.282	8.03
9F20044-CAL8	20	36879	0.287	8.03
9F20044-CAL9	50	90290	0.292	8.03
9F20044-CALA	100	194477	0.297	8.03
9F20044-CALB	200	365213	0.294	8.03

AVE RF **0.275** RF RSD **8.66** AVE RT **8.03**

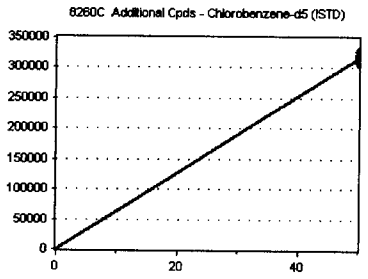
Element Calibration Review Sheet

Calibration ID: **A9F2102** Instrument: **VOA-GCMS9** Calibration Date: **06/21/2019**

Analysis: **8260C Additional Cpds** Instrument Cal ID: **VI190621W+.M VI190621G.I**

Chlorobenzene-d5 (ISTD)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9F20044-CAL1	50	319588	6391.760	9.92
9F20044-CAL2	50	315477	6309.540	9.92
9F20044-CAL3	50	322309	6446.180	9.92
9F20044-CAL4	50	321130	6422.600	9.92
9F20044-CAL5	50	311234	6224.680	9.92
9F20044-CAL6	50	317560	6351.200	9.92
9F20044-CAL7	50	309194	6183.880	9.92
9F20044-CAL8	50	321290	6425.800	9.92
9F20044-CAL9	50	308920	6178.400	9.92
9F20044-CALA	50	326979	6539.580	9.92
9F20044-CALB	50	310773	6215.460	9.92

AVE RF **6335.371** RF RSD **1.92** AVE RT **9.92**

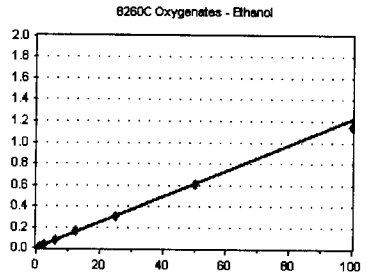
Element Calibration Review Sheet

Calibration ID: **A9F2102** Instrument: **VOA-GCMS9** Calibration Date: **06/21/2019**

Analysis: **8260C Oxygenates** Instrument Cal ID: **VI190621W+.M VI190621G.I**

Ethanol

Curve Fit: **AVERAGE RF**

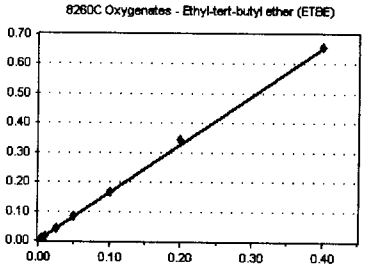


Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~6.25~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL2~~	~~12.5~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL3~~	~~25~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL4	62.5	3359	1.266	0.00
9F20044-CAL5	125	6404	1.237	0.00
9F20044-CAL6	312	16135	1.228	0.00
9F20044-CAL7	625	32934	1.263	0.00
9F20044-CAL8	1250	64932	1.226	0.00
9F20044-CAL9	2500	122303	1.203	0.00
9F20044-CALA	5000	245570	1.142	0.00

AVE RF **1.224** RF RSD **3.45** AVE RT **0.00**

Ethyl-tert-butyl ether (ETBE)

Curve Fit: **AVERAGE RF**

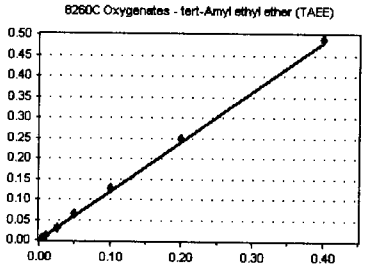


Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.025~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL2~~	~~0.05~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL3~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL4	0.25	1607	1.515	0.00
9F20044-CAL5	0.5	3218	1.554	0.00
9F20044-CAL6	1.25	8642	1.642	0.00
9F20044-CAL7	2.5	17677	1.694	0.00
9F20044-CAL8	5	35210	1.662	0.00
9F20044-CAL9	10	70328	1.729	0.00
9F20044-CALA	20	141315	1.642	0.00

AVE RF **1.634** RF RSD **4.63** AVE RT **0.00**

tert-Amyl ethyl ether (TAEE)

Curve Fit: **AVERAGE RF**

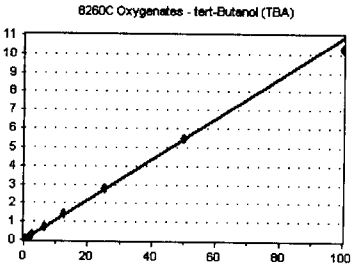


Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.025~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL2~~	~~0.05~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL3~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL4	0.25	1175	1.108	0.00
9F20044-CAL5	0.5	2362	1.140	0.00
9F20044-CAL6	1.25	6227	1.183	0.00
9F20044-CAL7	2.5	13457	1.290	0.00
9F20044-CAL8	5	26731	1.262	0.00
9F20044-CAL9	10	50305	1.237	0.00
9F20044-CALA	20	105118	1.222	0.00

AVE RF **1.206** RF RSD **5.44** AVE RT **0.00**

tert-Butanol (TBA)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~6.25~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL2	12.5	5907	0.110	0.00
9F20044-CAL3	25	11068	0.102	0.00
9F20044-CAL4	62.5	28689	0.108	0.00
9F20044-CAL5	125	56818	0.110	0.00
9F20044-CAL6	312	145017	0.110	0.00
9F20044-CAL7	625	295406	0.113	0.00
9F20044-CAL8	1250	596009	0.113	0.00
9F20044-CAL9	2500	1112985	0.109	0.00
9F20044-CALA	5000	2207246	0.103	0.00

AVE RF **0.109** RF RSD **3.56** AVE RT **0.00**

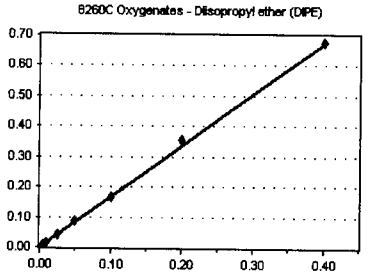
Element Calibration Review Sheet

Calibration ID: **A9F2102** Instrument: **VOA-GCMS9** Calibration Date: **06/21/2019**

Analysis: **8260C Oxygenates** Instrument Cal ID: **VI190621W+.M VI190621G.I**

Diisopropyl ether (DIPE)

Curve Fit: **AVERAGE RF**

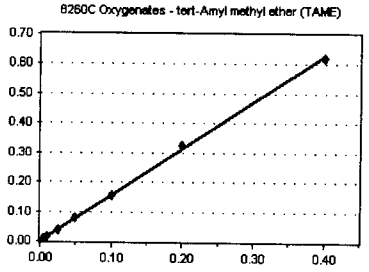


Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.025~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL2~~	~~0.05~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL3~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL4	0.25	1806	1.702	0.00
9F20044-CAL5	0.5	3461	1.671	0.00
9F20044-CAL6	1.25	8488	1.613	0.00
9F20044-CAL7	2.5	17804	1.706	0.00
9F20044-CAL8	5	34910	1.648	4.57
9F20044-CAL9	10	72280	1.777	0.00
9F20044-CALA	20	145556	1.692	0.00

AVE RF **1.687** RF RSD **3.06** AVE RT **0.65**

tert-Amyl methyl ether (TAME)

Curve Fit: **AVERAGE RF**

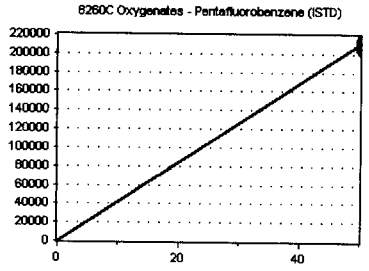


Standard	Concentration	Response	Response Factor	RT
~~9F20044-CAL1~~	~~0.025~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL2~~	~~0.05~~	~~0~~	~~0.000~~	~~0.00~~
~~9F20044-CAL3~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F20044-CAL4	0.25	1716	1.617	0.00
9F20044-CAL5	0.5	3075	1.485	0.00
9F20044-CAL6	1.25	8135	1.546	0.00
9F20044-CAL7	2.5	16510	1.582	0.00
9F20044-CAL8	5	33066	1.561	6.25
9F20044-CAL9	10	66498	1.635	0.00
9F20044-CALA	20	133827	1.555	0.00

AVE RF **1.569** RF RSD **3.16** AVE RT **0.89**

Pentafluorobenzene (ISTD)

Curve Fit: **AVERAGE RF**

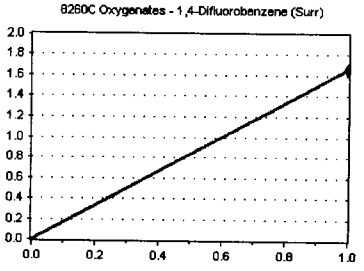


Standard	Concentration	Response	Response Factor	RT
9F20044-CAL1	50	216252	4325.040	6.22
9F20044-CAL2	50	214495	4289.900	6.22
9F20044-CAL3	50	216322	4326.440	6.22
9F20044-CAL4	50	212184	4243.680	6.22
9F20044-CAL5	50	207120	4142.400	6.22
9F20044-CAL6	50	210483	4209.660	6.22
9F20044-CAL7	50	208672	4173.440	6.22
9F20044-CAL8	50	211811	4236.220	6.22
9F20044-CAL9	50	203359	4067.180	6.22
9F20044-CALA	50	215096	4301.920	6.22
9F20044-CALB	50	204201	4084.020	6.22

AVE RF **4218.173** RF RSD **2.18** AVE RT **6.22**

1,4-Difluorobenzene (Surr)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9F20044-CAL1	50	358207	1.656	6.79
9F20044-CAL2	50	352562	1.644	6.78
9F20044-CAL3	50	354384	1.638	6.79
9F20044-CAL4	50	356332	1.679	6.79
9F20044-CAL5	50	346645	1.674	6.79
9F20044-CAL6	50	351357	1.669	6.79
9F20044-CAL7	50	346503	1.661	6.79
9F20044-CAL8	50	352468	1.664	6.79
9F20044-CAL9	50	340921	1.676	6.79
9F20044-CALA	50	358617	1.667	6.79
9F20044-CALB	50	342426	1.677	6.79

AVE RF **1.664** RF RSD **0.81** AVE RT **6.79**

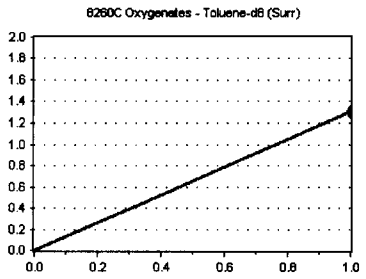
Element Calibration Review Sheet

Calibration ID: **A9F2102** Instrument: **VOA-GCMS9** Calibration Date: **06/21/2019**

Analysis: **8260C Oxygenates** Instrument Cal ID: **VI190621W+.M VI190621G.I**

Toluene-d8 (Surr)

Curve Fit: **AVERAGE RF**

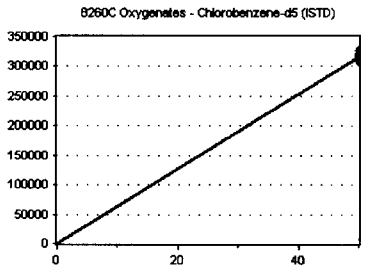


Standard	Concentration	Response	Response Factor	RT
9F20044-CAL1	50	419867	1.314	8.30
9F20044-CAL2	50	416463	1.320	8.30
9F20044-CAL3	50	421971	1.309	8.30
9F20044-CAL4	50	417568	1.300	8.30
9F20044-CAL5	50	408908	1.314	8.30
9F20044-CAL6	50	413565	1.302	8.30
9F20044-CAL7	50	406176	1.314	8.30
9F20044-CAL8	50	416334	1.296	8.30
9F20044-CAL9	50	405204	1.312	8.30
9F20044-CALA	50	420397	1.286	8.30
9F20044-CALB	50	405261	1.304	8.30

AVE RF **1.306** RF RSD **0.76** AVE RT **8.30**

Chlorobenzene-d5 (ISTD)

Curve Fit: **AVERAGE RF**

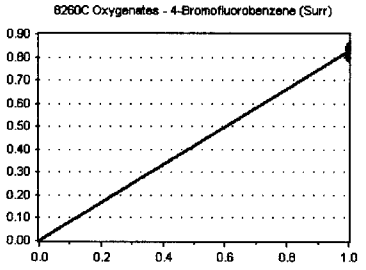


Standard	Concentration	Response	Response Factor	RT
9F20044-CAL1	50	319588	6391.760	9.92
9F20044-CAL2	50	315477	6309.540	9.92
9F20044-CAL3	50	322309	6446.180	9.92
9F20044-CAL4	50	321130	6422.600	9.92
9F20044-CAL5	50	311234	6224.680	9.92
9F20044-CAL6	50	317560	6351.200	9.92
9F20044-CAL7	50	309194	6183.880	9.92
9F20044-CAL8	50	321290	6425.800	9.92
9F20044-CAL9	50	308920	6178.400	9.92
9F20044-CALA	50	326979	6539.580	9.92
9F20044-CALB	50	310773	6215.460	9.92

AVE RF **6335.371** RF RSD **1.92** AVE RT **9.92**

4-Bromofluorobenzene (Surr)

Curve Fit: **AVERAGE RF**

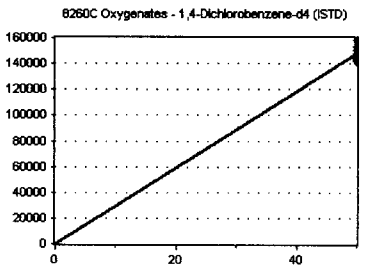


Standard	Concentration	Response	Response Factor	RT
9F20044-CAL1	50	122172	0.846	10.98
9F20044-CAL2	50	119949	0.839	10.98
9F20044-CAL3	50	123411	0.838	10.98
9F20044-CAL4	50	121837	0.836	10.98
9F20044-CAL5	50	118488	0.834	10.98
9F20044-CAL6	50	122376	0.833	10.98
9F20044-CAL7	50	120665	0.839	10.98
9F20044-CAL8	50	126396	0.824	10.98
9F20044-CAL9	50	122539	0.813	10.98
9F20044-CALA	50	127873	0.809	10.98
9F20044-CALB	50	118374	0.800	10.98

AVE RF **0.828** RF RSD **1.79** AVE RT **10.98**

1,4-Dichlorobenzene-d4 (ISTD)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9F20044-CAL1	50	144355	2887.100	11.86
9F20044-CAL2	50	143049	2860.980	11.86
9F20044-CAL3	50	147216	2944.320	11.86
9F20044-CAL4	50	145672	2913.440	11.86
9F20044-CAL5	50	142034	2840.680	11.86
9F20044-CAL6	50	146868	2937.360	11.86
9F20044-CAL7	50	143770	2875.400	11.86
9F20044-CAL8	50	153422	3068.440	11.86
9F20044-CAL9	50	150676	3013.520	11.86
9F20044-CALA	50	158080	3161.600	11.86
9F20044-CALB	50	147969	2959.380	11.86

AVE RF **2951.111** RF RSD **3.28** AVE RT **11.86**

Response Factor Report VOA-GCMS9

Method Path : C:\msdchem\1\methods\
Method File : VI190621W+.M
Title : EPA 8260: Volatile Organic Compounds
Last Update : Fri Jun 21 10:05:40 2019
Response Via : Initial Calibration

Calibration Files
0.1 =VI19062020.D 0.2 =VI19062021.D 0.5 =VI19062022.D 1 =VI19062023.D 2 =VI19062024.D 5 =VI19062025.D
10 =VI19062026.D 20 =VI19062027.D 50 =VI19062028.D 100 =VI19062030.D 200 =VI19062032.D

		Compound	0.1	0.2	0.5	1	2	5	10	20	50	100	200	Avg		%RSD
1)	I	Pentafluorobenzene...	ISTD													
2)		Dichlorodifluo...			0.413	0.451	0.508	0.510	0.548	0.535	0.592	0.563	0.546	0.518		10.82
3)	P	Chloromethane			0.808	0.673	0.653	0.612	0.652	0.636	0.671	0.624	0.613	0.660		9.10
4)	C	Vinyl Chloride		0.585	0.586	0.539	0.559	0.570	0.621	0.608	0.649	0.622	0.607	0.595		5.54
5)		Bromomethane				0.394	0.337	0.292	0.306	0.300	0.289	0.265	0.273	0.307		13.50
6)		Chloroethane				0.214	0.231	0.206	0.210	0.202	0.204			0.211		5.05
7)		Trichlorofluor...			0.575	0.655	0.657	0.652	0.709	0.687	0.724	0.689	0.660	0.668		6.45
8)		Ethanol				0.013	0.012	0.012	0.013	0.012	0.012	0.011		0.012		3.45
9)	C	1,1-Dichloroet...		0.531	0.622	0.644	0.690	0.671	0.723	0.719	0.752	0.693	0.711	0.676		9.41
10)		Carbon Disulfide			1.178	1.161	1.197	1.183	1.273	1.252	1.303	1.190	1.221	1.218		3.98
11)		Freon 113				0.396	0.430	0.421	0.456	0.451	0.474	0.431	0.452	0.439		5.52
12)		Iodomethane					0.072	0.078	0.113	0.170	0.295	0.330	0.364	0.203		61.14
13)		Acrolein					0.150	0.125	0.134	0.134	0.137	0.138	0.134	0.136		5.47
14)		Methylene Chlo...	1.162	0.443	0.218	0.119	0.088	0.062	0.056	0.052	0.052	0.047	0.048	0.213	E1	157.60
15)		Acetone					0.290	0.257	0.250	0.230	0.241	0.215	0.220	0.243		10.58
16)		t-1,2-Dichloro...			0.596	0.611	0.658	0.643	0.697	0.681	0.722	0.658	0.675	0.660		6.02
17)		n-Hexane				0.076	0.080	0.087	0.097	0.098	0.105	0.095	0.099	0.092		11.03
18)		Methyl-tert-bu...			1.521	1.587	1.554	1.606	1.646	1.648	1.748	1.598	1.635	1.616		4.02
19)		tert-Butanol ...		0.110	0.102	0.108	0.110	0.110	0.113	0.113	0.109	0.103		0.109		3.56
20)		Diisopropyl et...				1.702	1.671	1.613	1.706	1.648	1.777	1.692		1.687		3.06
21)	P	1,1-Dichloroet...			0.740	0.833	0.883	0.852	0.923	0.896	0.948	0.861	0.890	0.870		6.91
22)		Acrylonitrile				0.254	0.254	0.271	0.279	0.284	0.308	0.277	0.284	0.277		6.34
23)		Ethyl-tert-but...				1.515	1.554	1.642	1.694	1.662	1.729	1.642		1.634		4.63
24)		Vinyl Acetate				1.049	1.107	1.096	1.029	1.071	1.205	1.167	1.083	1.101		5.35
25)		c-1,2-Dichloro...			0.662	0.667	0.706	0.675	0.724	0.723	0.763	0.698	0.721	0.704		4.65
26)		2,2-Dichloropr...				0.654	0.669	0.647	0.702	0.692	0.730	0.664	0.679	0.679		4.04
27)		Bromochloromet...			0.253	0.306	0.321	0.338	0.348	0.347	0.375	0.326	0.309	0.325		10.66
28)	C	Chloroform			0.849	0.852	0.890	0.873	0.926	0.917	0.972	0.888	0.914	0.898		4.36
29)		Carbon Tetrach...				0.486	0.487	0.491	0.545	0.554	0.613	0.584	0.632	0.549		10.55
30)		Tetrahydrofuran					0.307	0.286	0.284	0.271	0.294	0.262	0.267	0.282		5.70
31)		1,1,1-Trichlor...			0.628	0.707	0.678	0.685	0.735	0.743	0.785	0.724	0.756	0.716		6.57
32)	S	Dibromofluorom...	0.537	0.531	0.528	0.536	0.536	0.538	0.541	0.538	0.549	0.543	0.552	0.539		1.33
33)		1,1-Dichloropr...			0.637	0.637	0.656	0.655	0.705	0.715	0.743	0.682	0.709	0.682		5.59
34)		2-Butanone (MEK)				0.439	0.422	0.393	0.400	0.402	0.423	0.376	0.388	0.406		5.18
35)		Benzene		2.177	2.088	2.000	2.036	2.027	2.133	2.099	2.193	2.022	2.083	2.086		3.18
36)		tert-Amyl meth...				1.617	1.485	1.546	1.582	1.561	1.635	1.555		1.569		3.16
37)		1,2-Dichloroet...			0.600	0.694	0.688	0.680	0.712	0.702	0.746	0.678	0.698	0.689		5.65
38)		iso-Butyl Alcohol						0.039	0.041	0.041	0.046	0.040	0.041	0.041		5.80
39)	S	1,4-Difluorobe...	1.656	1.644	1.638	1.679	1.674	1.669	1.661	1.664	1.676	1.667	1.677	1.664		0.81
40)		Trichloroethen...			0.445	0.493	0.479	0.490	0.532	0.525	0.544	0.506	0.525	0.505		6.15
41)		Tert-Amyl-Ethy...				1.108	1.140	1.183	1.290	1.262	1.237	1.222		1.206		5.44

Method Path : C:\msdchem\1\methods\
Method File : VI190621W+.M
Title : EPA 8260: Volatile Organic Compounds

42)		Dibromomethane			0.250	0.308	0.329	0.328	0.349	0.349	0.374	0.343	0.357	0.332	10.86
43)	C	1,2-Dichloropr...			0.469	0.517	0.523	0.530	0.557	0.552	0.576	0.533	0.550	0.534	5.75
44)		Bromodichlorom...			0.548	0.534	0.584	0.585	0.625	0.633	0.696	0.650	0.692	0.616	9.41
45)		Chlorobenzene-d5 (I)	----------	ISTD	----------										
46)		2-Chloroethyl ...				0.236	0.243	0.266	0.282	0.287	0.292	0.297	0.294	0.275	8.66
47)		c-1,3-Dichloro...			0.425	0.471	0.495	0.488	0.537	0.528	0.580	0.536	0.561	0.514	9.38
48)	S	Toluene-d8 (S)	1.314	1.320	1.309	1.300	1.314	1.302	1.314	1.296	1.312	1.286	1.304	1.306	0.76
49)	C	Toluene	1.616	1.514	1.416	1.364	1.377	1.328	1.453	1.417	1.469	1.347	1.388	1.426	5.87
50)		Tetrachloroeth...			0.272	0.321	0.320	0.317	0.343	0.337	0.346	0.323	0.337	0.324	6.88
51)		4-Methyl-2-Pen...					0.495	0.501	0.514	0.510	0.542	0.471	0.467	0.500	5.16
52)		t-1,3-Dichloro...			0.406	0.420	0.420	0.436	0.483	0.490	0.545	0.503	0.529	0.470	10.91
53)		1,1,2-Trichlor...			0.266	0.288	0.315	0.308	0.336	0.329	0.347	0.318	0.324	0.315	7.89
54)		Dibromochlorom...				0.238	0.247	0.263	0.288	0.299	0.342	0.330	0.354	0.295	14.87
55)		1,3-Dichloropr...			0.493	0.550	0.559	0.561	0.583	0.573	0.611	0.551	0.566	0.561	5.67
56)		1,2-Dibromoeth...		0.235	0.297	0.313	0.329	0.337	0.360	0.356	0.381	0.348	0.358	0.331	12.58
57)		2-Hexanone			0.388	0.370	0.358	0.353	0.381	0.372	0.399	0.346	0.347	0.368	5.06
58)	P	Chlorobenzene		0.799	0.828	0.844	0.865	0.857	0.912	0.891	0.931	0.862	0.884	0.867	4.53
59)	C	Ethylbenzene	1.356	1.552	1.405	1.438	1.440	1.469	1.571	1.549	1.620	1.493	1.539	1.494	5.35
60)		1,1,1,2-Tetrac...			0.204	0.211	0.253	0.247	0.277	0.281	0.309	0.293	0.309	0.265	14.74
61)		m,p-Xylenes (2)	1.055	1.168	1.045	1.073	1.078	1.088	1.181	1.157	1.232	1.137	1.165	1.125	5.38
62)		o-Xylene	1.100	1.086	1.036	1.090	1.137	1.109	1.225	1.199	1.275	1.170	1.192	1.147	6.21
63)		Styrene		0.791	0.738	0.799	0.825	0.850	0.947	0.938	1.006	0.922	0.948	0.876	9.97
64)	P	Bromoform				0.135	0.153	0.160	0.173	0.192	0.230			0.174	19.42
65)		Isopropylbenzene		1.263	1.229	1.249	1.312	1.309	1.456	1.429	1.505	1.399	1.433	1.359	7.17
66)	I	1,4-Dichlorobenzen...	----------	ISTD	----------										
67)	S	4-Bromofluorob...	0.846	0.839	0.838	0.836	0.834	0.833	0.839	0.824	0.813	0.809	0.800	0.828	1.79
68)		Bromobenzene		0.710	0.734	0.757	0.783	0.743	0.820	0.788	0.813	0.744	0.773	0.766	4.61
69)		n-Propylbenzene		3.231	3.058	3.326	3.305	3.303	3.657	3.533	3.664	3.406	3.549	3.403	5.76
70)	P	1,1,2,2-Tetrac...		0.571	0.600	0.637	0.647	0.663	0.697	0.667	0.706	0.605	0.626	0.642	6.68
71)		2-Chlorotoluene			0.655	0.636	0.668	0.665	0.732	0.711	0.734	0.682	0.705	0.687	5.06
72)		1,3,5-Trimethy...		2.237	2.149	2.204	2.142	2.216	2.456	2.380	2.485	2.325	2.408	2.300	5.52
73)		1,2,3-Trichlor...			0.206	0.294	0.305	0.304	0.325	0.311	0.323	0.289	0.296	0.295	11.99
74)		t-1,4-Dichloro...			0.185	0.229	0.219	0.248	0.266	0.268	0.292	0.259	0.272	0.249	13.12
75)		4-Chlorotoluene		2.188	1.943	2.112	2.048	2.066	2.256	2.191	2.270	2.081	2.159	2.131	4.75
76)		tert-Butylbenzene		1.297	1.171	1.282	1.325	1.288	1.397	1.368	1.429	1.324	1.375	1.326	5.52
77)		1,2,4-Trimethy...		2.200	2.007	2.243	2.226	2.229	2.470	2.407	2.512	2.331	2.436	2.306	6.68
78)		sec-Butylbenzene		2.962	2.549	2.776	2.677	2.723	3.024	2.947	3.069	2.853	2.948	2.853	5.86
79)		4-Isopropyltol...		1.987	1.977	2.077	2.149	2.182	2.408	2.377	2.532	2.366	2.460	2.251	8.97
80)		1,3-Dichlorobe...		1.262	1.259	1.341	1.326	1.312	1.419	1.381	1.426	1.318	1.366	1.341	4.32
81)		1,4-Dichlorobe...		1.328	1.349	1.384	1.388	1.373	1.435	1.404	1.459	1.342	1.383	1.384	2.93
82)		n-Butylbenzene		1.791	1.939	1.860	1.933	2.001	2.208	2.193	2.309	2.164	2.251	2.065	8.76
83)		1,2-Dichlorobe...		1.204	1.209	1.323	1.275	1.282	1.381	1.344	1.409	1.253	1.309	1.299	5.24
84)		1,2-Dibromo-3-...					0.173	0.170	0.196	0.204	0.233	0.212	0.231	0.203	12.44
85)		Hexachlorobuta...				0.149	0.164	0.171	0.203	0.205	0.212	0.194	0.201	0.187	12.10
86)		1,2,4-Trichlor...			0.549	0.683	0.703	0.704	0.798	0.799	0.852	0.798	0.839	0.747	12.92
87)		Naphthalene			2.160	2.066	2.174	2.286	2.527	2.570	2.787	2.660	2.765	2.444	11.31
88)		1,2,3-Trichlor...			0.568	0.680	0.696	0.685	0.757	0.761	0.809	0.760	0.812	0.725	10.61

(#) = Out of Range

Compound List Report VOA-GCMS9

Method Path : C:\msdchem\1\methods\
Method File : VI190621W+.M
Title : EPA 8260: Volatile Organic Compounds
Last Update : Fri Jun 21 10:05:40 2019
Response Via : Initial Calibration

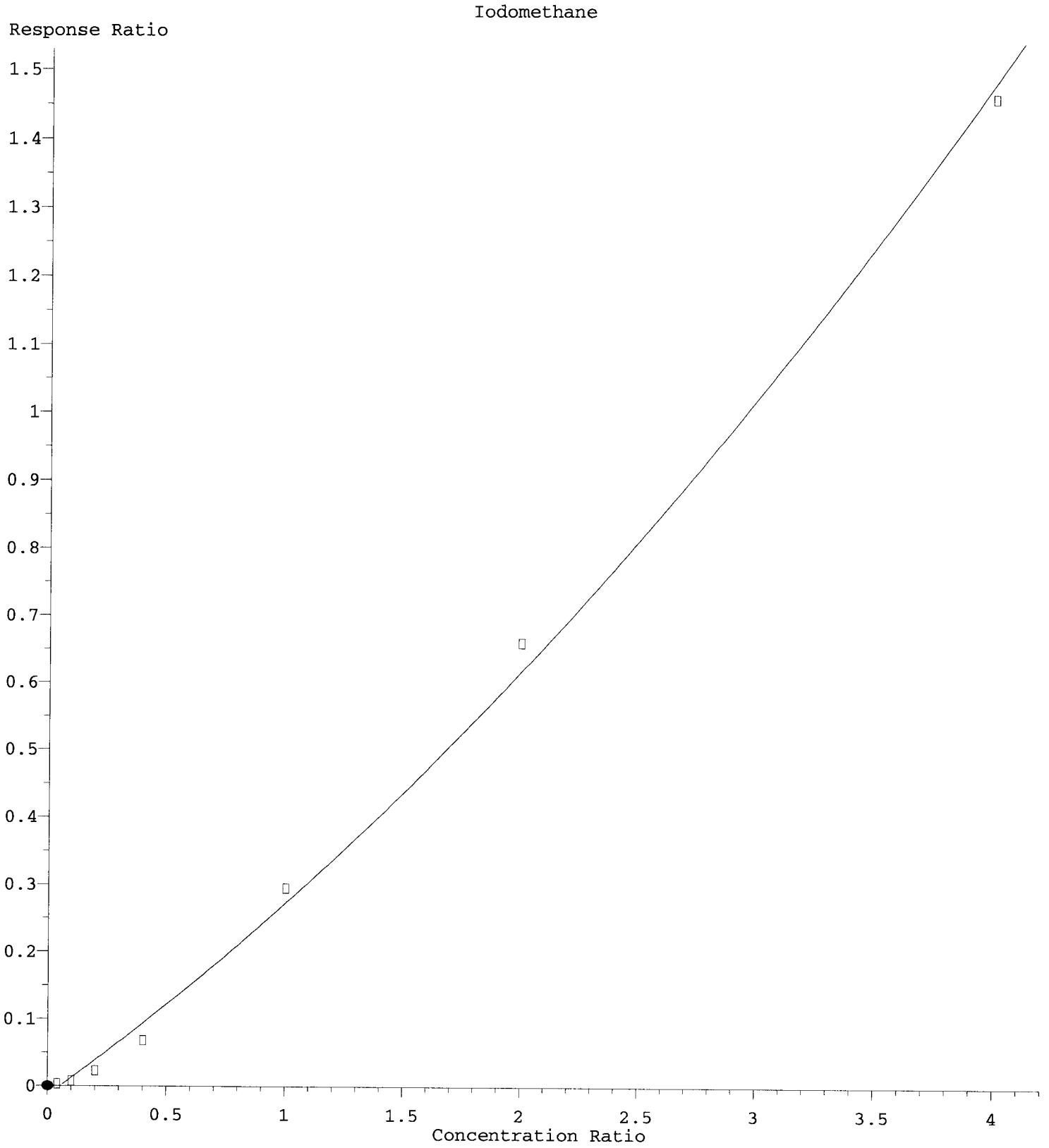
Total Cpnds : 88

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	Pentafluorobenzene (I)	168	6.223	1.000	A	2	A	R
2		Dichlorodifluoromethane	85	1.679	0.270	A	2	A	R
3	P	Chloromethane	50	1.897	0.305	A	2	A	R
4	C	Vinyl Chloride	62	2.001	0.322	A	2	A	R
5		Bromomethane	96	2.366	0.380	A	2	A	R
6		Chloroethane	64	2.499	0.402	A	2	A	R
7		Trichlorofluoromethane	101	2.664	0.428	A	2	A	R
8		Ethanol	45	3.236	0.520	A	1	A	R
9	C	1,1-Dichloroethene	61	3.236	0.520	A	2	A	R
10		Carbon Disulfide	76	3.254	0.523	A	2	A	R
11		Freon 113	101	3.291	0.529	A	2	A	R
12		Iodomethane	142	3.394	0.545	Q	2	A	R
13		Acrolein	56	3.625	0.583	A	2	A	R
14		Methylene Chloride	84	3.874	0.623	Q	2	A	R
15		Acetone	43	3.942	0.633	A	1	A	R
16		t-1,2-Dichloroethene	61	4.045	0.650	A	2	A	R
17		n-Hexane	86	4.124	0.663	A	3	A	R
18		Methyl-tert-butyl-ether	73	4.172	0.670	A	3	A	R
19		tert-Butanol (TBA)	59	4.294	0.690	A	1	A	R
20		Diisopropyl ether (DIPE)	45	4.568	0.734	A	2	A	R
21	P	1,1-Dichloroethane	63	4.690	0.754	A	2	A	R
22		Acrylonitrile	53	4.757	0.764	A	2	A	R
23		Ethyl-tert-butyl ether (ETBE)	59	4.945	0.795	A	2	A	R
24		Vinyl Acetate	43	4.963	0.798	A	2	A	R
25		c-1,2-Dichloroethene	61	5.250	0.844	A	2	A	R
26		2,2-Dichloropropane	77	5.359	0.861	A	2	A	R
27		Bromochloromethane	130	5.450	0.876	A	2	A	R
28	C	Chloroform	83	5.530	0.889	A	2	A	R
29		Carbon Tetrachloride	117	5.663	0.910	A	2	A	R
30		Tetrahydrofuran	42	5.705	0.917	A	2	A	R
31		1,1,1-Trichloroethane	97	5.736	0.922	A	2	A	R
32	S	Dibromofluoromethane (S)	111	5.718	0.919	A	2	A	R
33		1,1-Dichloropropene	75	5.864	0.942	A	2	A	R
34		2-Butanone (MEK)	43	5.858	0.941	A	2	A	R
35		Benzene	78	6.126	0.984	A	2	A	R
36		tert-Amyl methyl ether (TAME)	73	6.253	1.005	A	2	A	R
37		1,2-Dichloroethane (EDC)	62	6.345	1.020	A	2	A	R
38		iso-Butyl Alcohol	43	6.375	1.024	A	2	A	R
39	S	1,4-Difluorobenzene (S)	114	6.789	1.091	A	2	A	R
40		Trichloroethene (TCE)	130	6.746	1.084	A	2	A	R
41		Tert-Amyl-Ethyl-Ether (TAEE)	59	7.001	1.125	A	2	A	R
42		Dibromomethane	93	7.203	1.157	A	2	A	R
43	C	1,2-Dichloropropane	63	7.318	1.176	A	2	A	R
44		Bromodichloromethane	83	7.385	1.187	A	2	A	R
45	I	Chlorobenzene-d5 (I)	117	9.916	1.000	A	2	A	R
46		2-Chloroethyl Vinyl Ether	63	8.029	0.810	A	2	A	R
47		c-1,3-Dichloropropene	75	8.096	0.816	A	2	A	R
48	S	Toluene-d8 (S)	98	8.304	0.837	A	2	A	R
49	C	Toluene	91	8.364	0.844	A	2	A	R
50		Tetrachloroethene (PCE)	166	8.803	0.888	A	2	A	R
51		4-Methyl-2-Pentanone (MIBK)	43	8.802	0.888	A	2	A	R
52		t-1,3-Dichloropropene	75	8.839	0.891	A	2	A	R
53		1,1,2-Trichloroethane	97	9.009	0.909	A	2	A	R
54		Dibromochloromethane	129	9.191	0.927	A	2	A	R
55		1,3-Dichloropropane	76	9.295	0.937	A	2	A	R

56		1,2-Dibromoethane (EDB)	107	9.429	0.951	A		2	A	R
57		2-Hexanone	43	9.660	0.974	A		2	A	R
58	P	Chlorobenzene	112	9.934	1.002	A		2	A	R
59	C	Ethylbenzene	91	9.958	1.004	A		2	A	R
60		1,1,1,2-Tetrachloroethane	131	9.994	1.008	A		2	A	R
61		m,p-Xylenes (2)	91	10.092	1.018	A		2	A	R
62		o-Xylene	91	10.469	1.056	A		2	A	R
63		Styrene	104	10.518	1.061	A		2	A	R
64	P	Bromoform	173	10.542	1.063	Q	V4	2	A	R
65		Isopropylbenzene	105	10.737	1.083	A		2	A	R
66	I	1,4-Dichlorobenzene-d4 (I)	152	11.856	1.000	A		2	A	R
67	S	4-Bromofluorobenzene (S)	174	10.980	0.926	A		2	A	R
68		Bromobenzene	156	11.066	0.933	A		2	A	R
69		n-Propylbenzene	91	11.077	0.934	A		2	A	R
70	P	1,1,2,2-Tetrachloroethane	85	11.145	0.940	A		2	A	R
71		2-Chlorotoluene	126	11.211	0.946	A		2	A	R
72		1,3,5-Trimethylbenzene	105	11.235	0.948	A		2	A	R
73		1,2,3-Trichloropropane	110	11.254	0.949	A		2	A	R
74		t-1,4-Dichloro-2-butene	53	11.284	0.952	A		3	A	R
75		4-Chlorotoluene	91	11.339	0.956	A		2	A	R
76		tert-Butylbenzene	91	11.485	0.969	A		2	A	R
77		1,2,4-Trimethylbenzene	105	11.540	0.973	A		2	A	R
78		sec-Butylbenzene	105	11.625	0.980	A		2	A	R
79		4-Isopropyltoluene	119	11.728	0.989	A		2	A	R
80		1,3-Dichlorobenzene	146	11.802	0.995	A		2	A	R
81		1,4-Dichlorobenzene	146	11.869	1.001	A		2	A	R
82		n-Butylbenzene	91	12.051	1.016	A		2	A	R
83		1,2-Dichlorobenzene	146	12.185	1.028	A		2	A	R
84		1,2-Dibromo-3-Chloropropane	157	12.805	1.080	A		2	A	R
85		Hexachlorobutadiene	223	13.310	1.123	A		3	A	R
86		1,2,4-Trichlorobenzene	180	13.353	1.126	A		2	A	R
87		Naphthalene	128	13.632	1.150	A		2	A	R
88		1,2,3-Trichlorobenzene	180	13.791	1.163	A		2	A	R

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

VI190621W+.M Fri Jun 21 10:41:26 2019

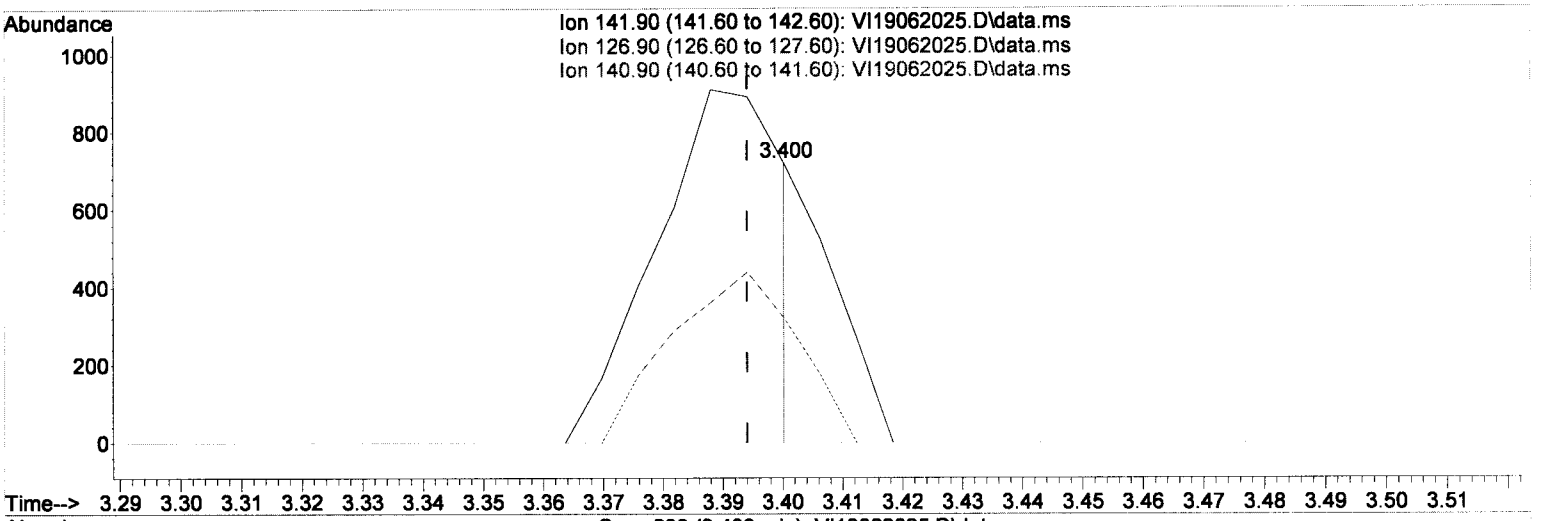


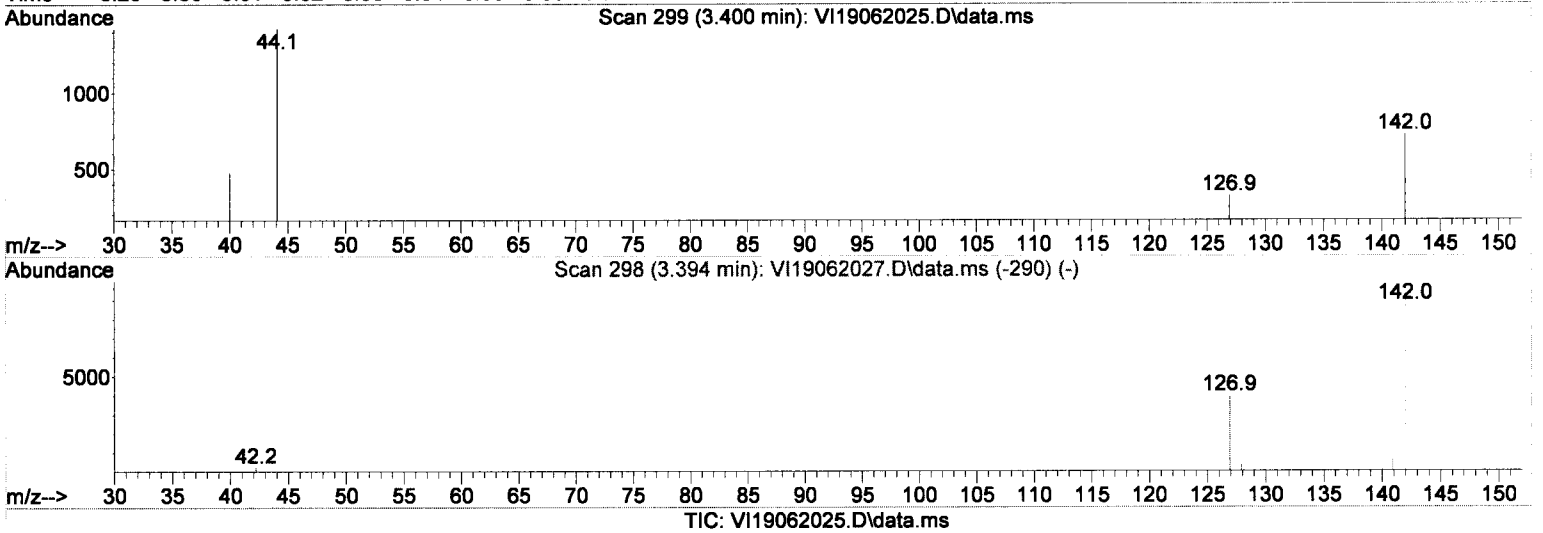
R = 2.89e-002 A*A + 2.58e-001 A - 1.37e-002
Coef of Det (r^2) = 0.993 Curve Fit: Quadratic w(1/a)
Method Name: C:\msdchem\1\methods\V1190621W+.M
Calibration Table Last Updated: Fri Jun 21 10:15:13 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F20044\REQUANT\
Data File : VI19062025.D
Acq On : 20 Jun 2019 8:31 pm
Operator : MM
Sample : 9F20044-CAL6
Misc : 1X 5mL 5/10PPB VOCR+OXY
ALS Vial : 9 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 10:27:41 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration





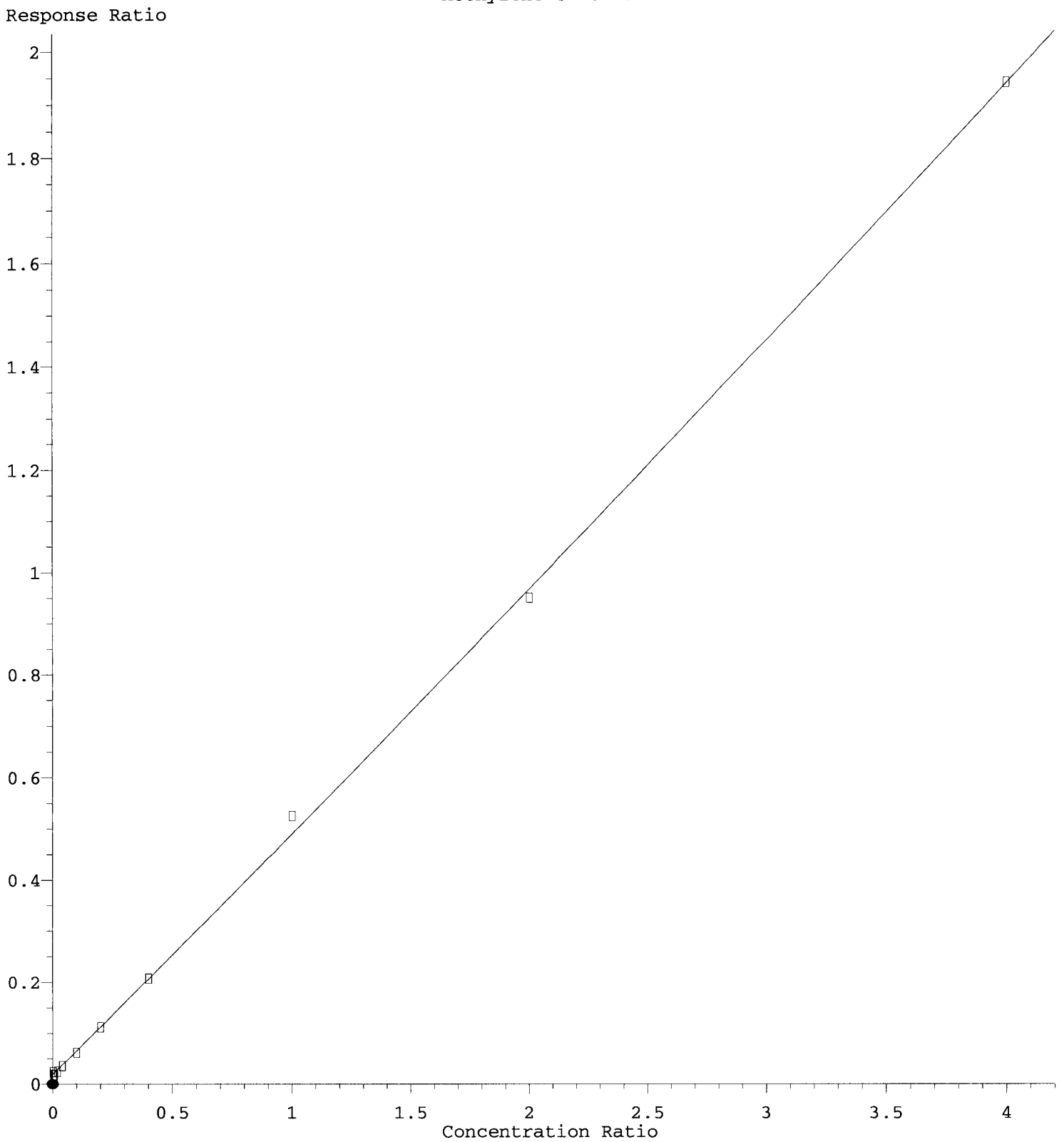
TIC: VI19062025.D\data.ms

(12) Iodomethane

3.400min (+ 0.006) 2.91 ug/L m

response 291

Ion	Exp%	Act%
141.90	100.00	100.00
126.90	34.80	44.66
140.90	15.30	0.00#
0.00	0.00	0.00

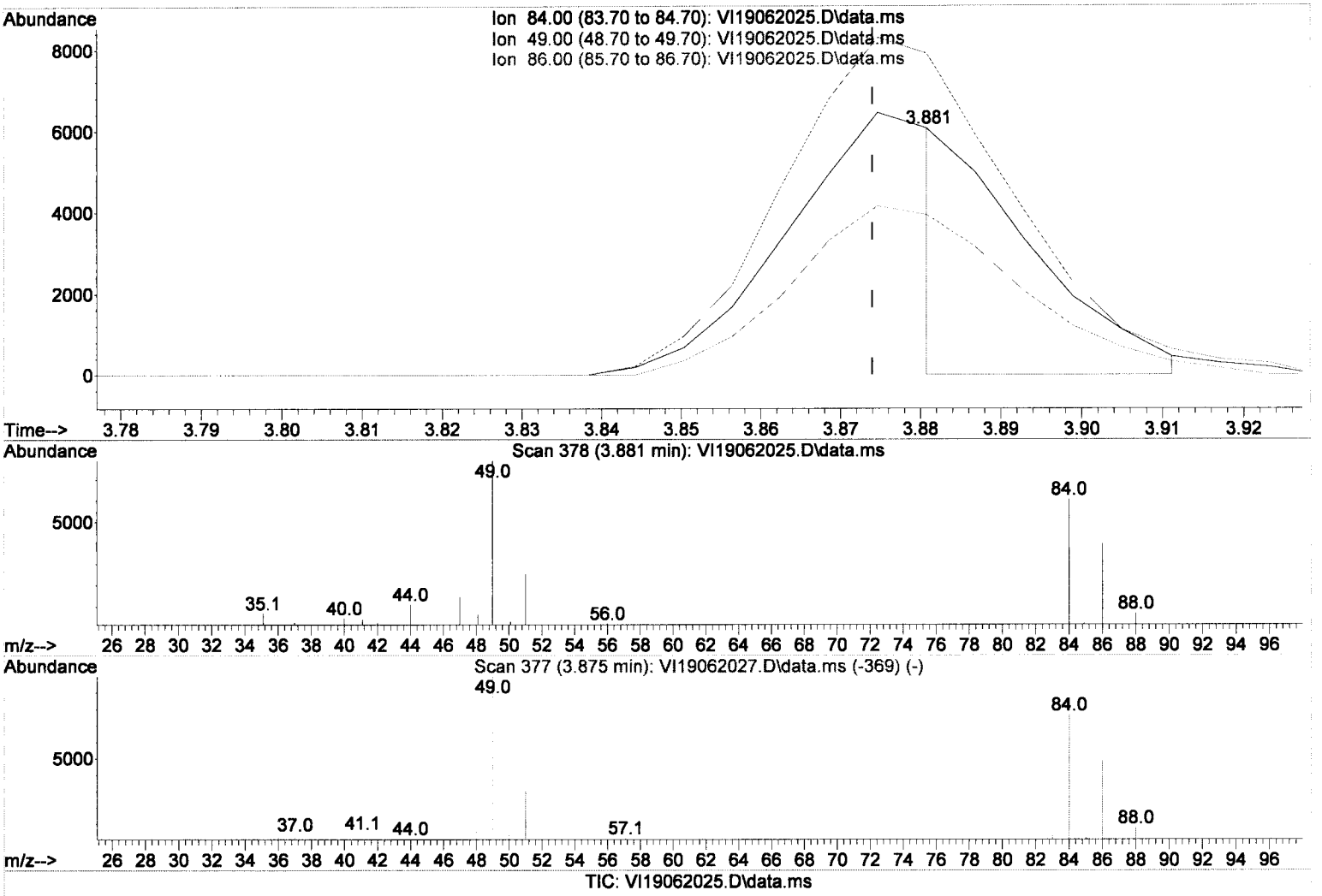


R = 2.67e-003 A*A + 4.69e-001 A + 1.89e-002
Coef of Det (r^2) = 0.992 Curve Fit: Quadratic w(1/a)
Method Name: C:\msdchem\1\methods\V1190621W+.M
Calibration Table Last Updated: Fri Jun 21 10:15:55 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F20044\REQUANT\
Data File : VI19062025.D
Acq On : 20 Jun 2019 8:31 pm
Operator : MM
Sample : 9F20044-CAL6
Misc : 1X 5mL 5/10PPB VOCR+OXY
ALS Vial : 9 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 10:27:41 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



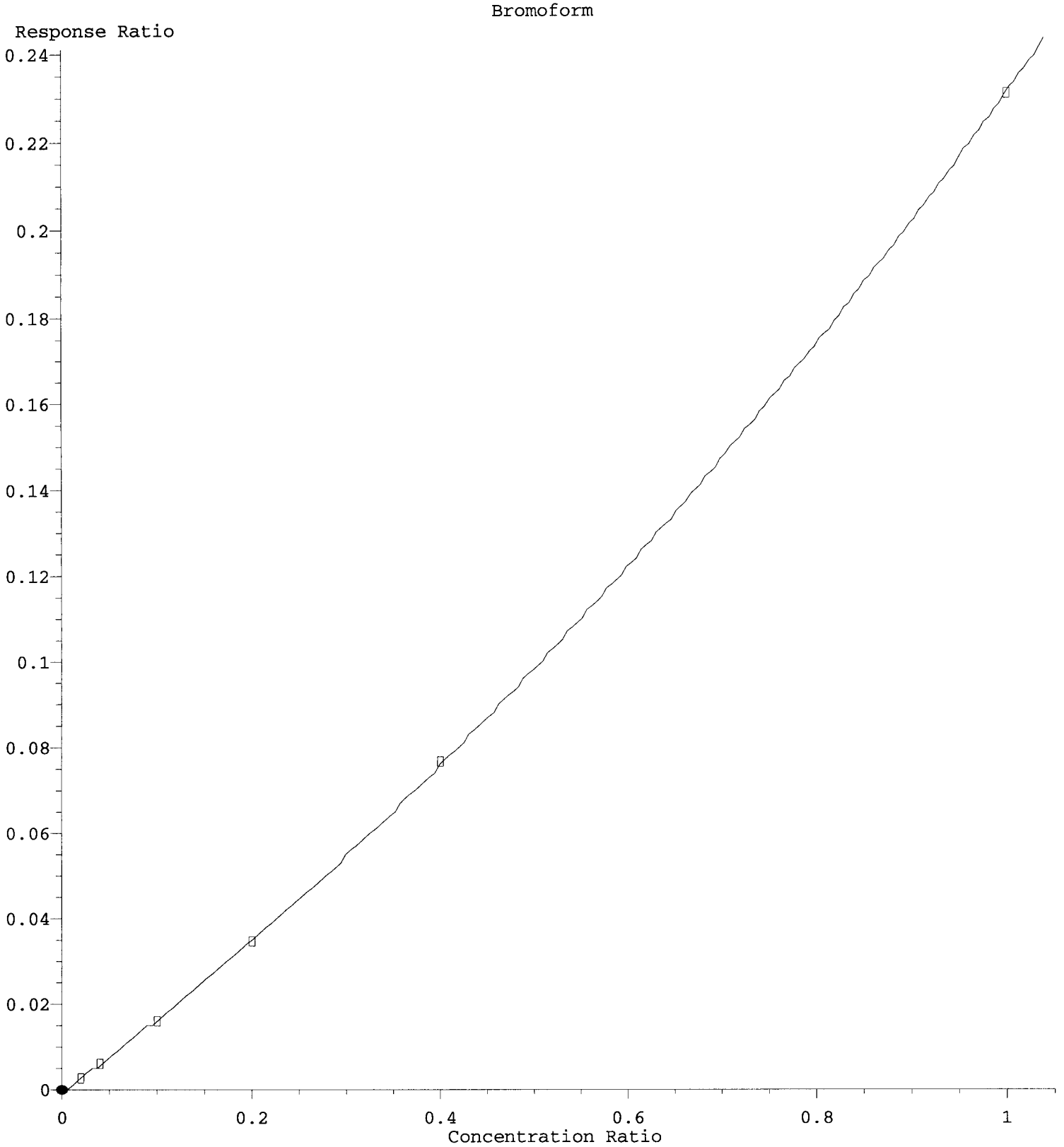
TIC: VI19062025.D\data.ms

(14) Methylene Chloride

3.881min (+ 0.007) 0.17 ug/L m

response 4307

Ion	Exp%	Act%
84.00	100.00	100.00
49.00	134.70	130.45
86.00	61.50	64.88
0.00	0.00	0.00

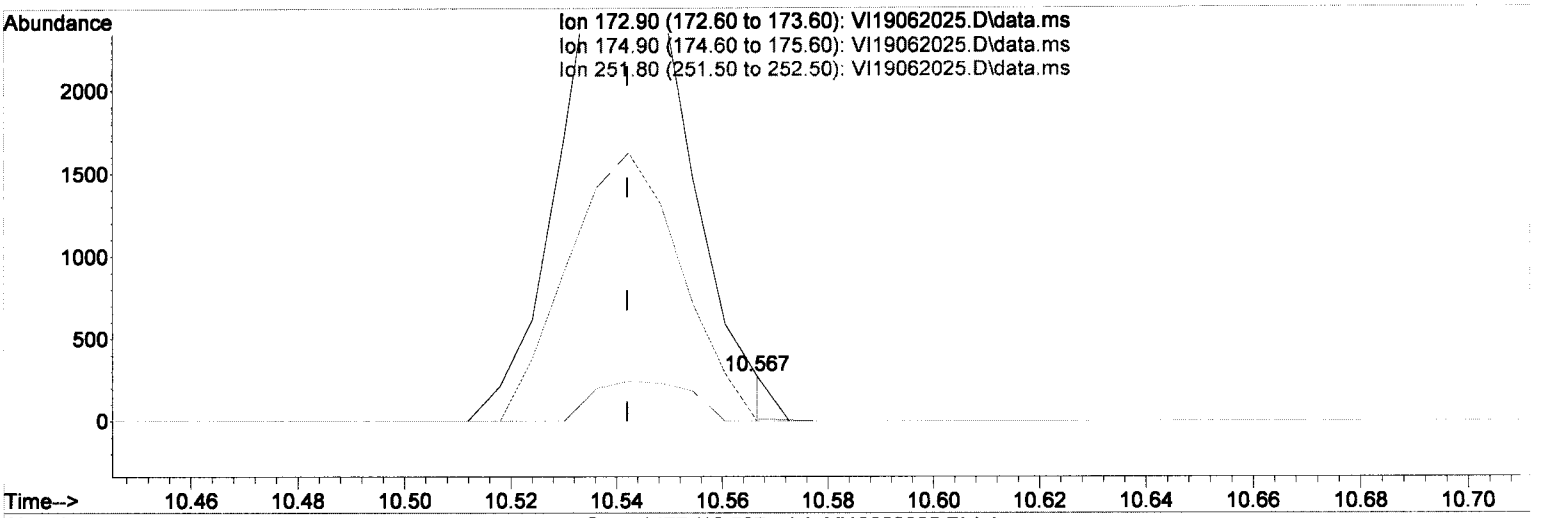


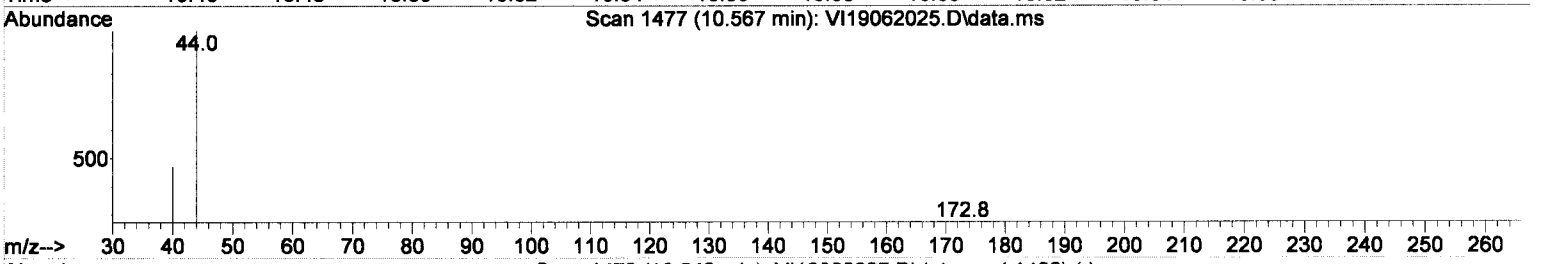
R = 6.67e-002 A*A + 1.65e-001 A - 6.64e-004
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)
Method Name: C:\msdchem\1\methods\V1190621W+.M
Calibration Table Last Updated: Fri Jun 21 10:35:40 2019

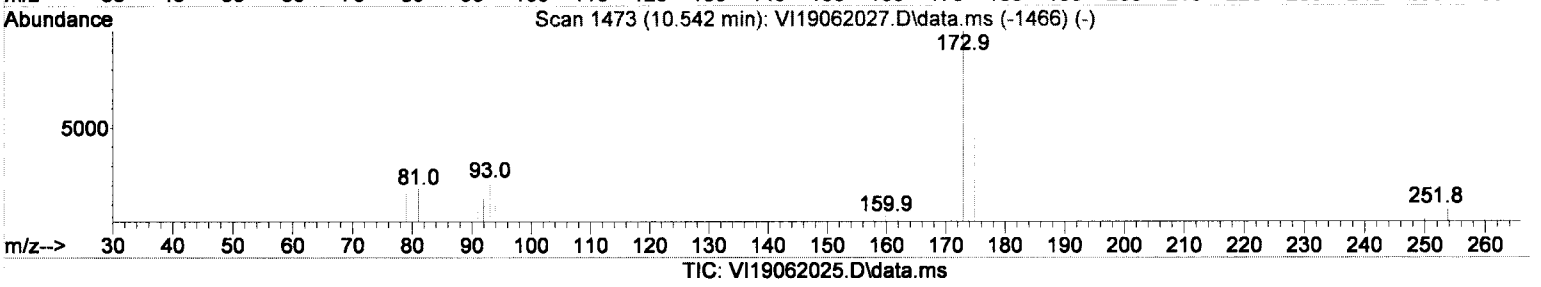
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F20044\REQUANT\
Data File : VI19062025.D
Acq On : 20 Jun 2019 8:31 pm
Operator : MM
Sample : 9F20044-CAL6
Misc : 1X 5mL 5/10PPB VOCR+OXY
ALS Vial : 9 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 10:35:44 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration







(64) Bromoform (P)

10.567min (+ 0.025) 0.20 ug/L m

response -5

Ion	Exp%	Act%
172.90	100.00	100.00
174.90	49.20	0.00#
251.80	13.30	0.00
0.00	0.00	-0.00

CALIBRATION SEQUENCE REVIEW SHEET

SEQUENCE: 9F20044

Analysis Included
8260C Full List
8260C Additional Cpds
8260C Oxygenates

INSTRUMENT SEQUENCE LOG

SampleID	SampleName	Matrix	STDID	ISTD_ID	Analyzed
9F20044-TUN1	MS Tune	Water		A19C125	6/20/2019 5:22:00PM
9F20044-ICB1	Initial Cal Blank	Water		A19C125	6/20/2019 5:49:00PM
9F20044-CAL1	Cal Standard	Water	A19F282	"	6/20/2019 6:16:00PM
9F20044-CAL2	Cal Standard	Water	A19F283	"	6/20/2019 6:43:00PM
9F20044-CAL3	Cal Standard	Water	A19F284	"	6/20/2019 7:10:00PM
9F20044-CAL4	Cal Standard	Water	A19F285	"	6/20/2019 7:37:00PM
9F20044-CAL5	Cal Standard	Water	A19F286	"	6/20/2019 8:04:00PM
9F20044-CAL6	Cal Standard	Water	A19F287	"	6/20/2019 8:31:00PM
9F20044-CAL7	Cal Standard	Water	A19F288	"	6/20/2019 8:58:00PM
9F20044-CAL8	Cal Standard	Water	A19F289	"	6/20/2019 9:25:00PM
9F20044-CAL9	Cal Standard	Water	A19F290	"	6/20/2019 9:52:00PM
9F20044-CALA	Cal Standard	Water	A19F291	"	6/20/2019 10:46:00PM
9F20044-CALB	Cal Standard	Water	A19F292	"	6/20/2019 11:40:00PM
9F20044-ICV1	Initial Cal Check	Water	A19F293	"	6/21/2019 1:01:00AM
9F20044-ICV2	Initial Cal Check	Water	A19E195	"	6/21/2019 1:28:00AM

CALIBRATION STANDARD RECOVERIES

Calibration: A9F2102 Instrument: VOA-GCMS9

8260C Full List Sequence: 9F20044 Matrix: Water

9F20044-CAL1	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9F20044-CAL2	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9F20044-CAL3	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9F20044-CAL4	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9F20044-CAL5	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9F20044-CAL6	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9F20044-CAL7	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9F20044-CAL8	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9F20044-CAL9	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9F20044-CALA	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9F20044-CALB	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual

CALIBRATION SEQUENCE REVIEW SHEET

SEQUENCE: 9F20044

Compounds listed above have recalculated recoveries outside 70-130% of the true values, and the calibration levels are above the reporting level. If no compounds are listed, all are OK. Please see the next section for quadatic fit compounds.

Analytes With Quadratic Curve Fits

Qualifier	iMDL	iMRL	Spike Amt	%Difference	OK?	Raise MRL to ?
					☐	☐

Analytes listed above have quadratic curve fits. If they are using a weighting otpion, they must be checked against the requanted curve points to determine if the recalculated results are within limits (70-130 or as specified).

ICV RECOVERIES

Calibration: **A9F2102** Instrument: **VOA-GCMS9**

8260C Full List Sequence: **9F20044** Matrix: **Water**

9F20044-ICV1	**Inst. MRL**	**ICV Level**	**Result**	**%Rec.**	**Qual**
9F20044-ICV2	**Inst. MRL**	**ICV Level**	**Result**	**%Rec.**	**Qual**

Compounds listed above have Initial Calibration Verification standard recoveries outside 70-130% of the true values. If no compounds are listed, all have passing recoveries.

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062035.D
Acq On : 21 Jun 2019 1:01 am
Operator : MM
Sample : 9F20044-ICV1
Misc : 1X 5mL 20/40PPB VOCR
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 10:40:31 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration

MM 6/21/19

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene (I)	50.000	50.000	0.0	100	0.00
2		Dichlorodifluoromethane	20.000	22.655	-13.3	110	0.01
3	P	Chloromethane	20.000	20.431	-2.2	106	0.00
4	C	Vinyl Chloride	20.000	20.188	-0.9	99	0.00
5		Bromomethane	20.000	19.281	3.6	99	0.00
6		Chloroethane	20.000	19.256	3.7	101	0.00
7		Trichlorofluoromethane	20.000	19.778	1.1	96	0.00
8		~~Ethanol~~	~~1250.000~~	~~28.841~~	~~97.7#~~	~~2~~	~~0.02~~
9	C	1,1-Dichloroethene	20.000	21.016	-5.1	99	0.00
10		Carbon Disulfide	20.000	22.077	-10.4	107	0.00
11		Freon 113	20.000	20.460	-2.3	99	0.01
12		Iodomethane	20.000	18.120	9.4	123	0.00
13		Acrolein	20.000	19.485	2.6	99	0.00
14		Methylene Chloride	20.000	20.532	-2.7	102	0.00
15		Acetone	40.000	38.984	2.5	103	0.01
16		t-1,2-Dichloroethene	20.000	21.653	-8.3	105	0.00
17		n-Hexane	20.000	20.430	-2.1	96	0.00
18		Methyl-tert-butyl-ether	20.000	20.303	-1.5	99	0.00
19		~~tert-Butanol (TBA)~~	~~1250.000~~	~~15.938~~	~~98.7#~~	~~1~~	~~0.01~~
20		~~Diisopropyl ether (DIPE)~~	~~5.000~~	~~0.081~~	~~98.4#~~	~~2~~	~~0.00~~
21	P	1,1-Dichloroethane	20.000	21.972	-9.9	107	0.00
22		Acrylonitrile	20.000	20.501	-2.5	100	0.00
23		~~Ethyl-tert-butyl ether (ET~~	~~5.000~~	~~0.074~~	~~98.5#~~	~~2~~	~~0.00~~
24		Vinyl Acetate	20.000	19.354	3.2	99	0.00
25		c-1,2-Dichloroethene	20.000	20.741	-3.7	101	0.00
26		2,2-Dichloropropane	20.000	18.952	5.2	93	0.00
27		Bromochloromethane	20.000	21.990	-9.9	103	0.00
28	C	Chloroform	20.000	20.737	-3.7	101	0.00
29		Carbon Tetrachloride	20.000	20.656	-3.3	102	0.00
30		Tetrahydrofuran	20.000	19.878	0.6	103	0.00
31		1,1,1-Trichloroethane	20.000	21.347	-6.7	103	0.00
32	S	Dibromofluoromethane (S)	50.000	49.709	0.6	99	0.00
33		1,1-Dichloropropene	20.000	20.704	-3.5	99	0.00
34		2-Butanone (MEK)	40.000	39.531	1.2	99	0.00
35		Benzene	20.000	20.383	-1.9	101	0.00
36		~~tert-Amyl methyl ether (TA~~	~~5.000~~	~~0.120~~	~~97.6#~~	~~3~~	~~0.00~~
37		1,2-Dichloroethane (EDC)	20.000	21.213	-6.1	104	0.00
38		iso-Butyl Alcohol	500.000	543.917	-8.8	109	0.00
39	S	1,4-Difluorobenzene (S)	50.000	50.377	-0.8	101	0.00
40		Trichloroethene (TCE)	20.000	20.973	-4.9	101	0.00
41		~~Tert-Amyl-Ethyl-Ether (TAEE~~	~~5.000~~	~~0.065~~	~~98.7#~~	~~1~~	~~0.00~~
42		Dibromomethane	20.000	21.205	-6.0	101	0.00
43	C	1,2-Dichloropropane	20.000	20.979	-4.9	101	0.00
44		Bromodichloromethane	20.000	21.276	-6.4	103	0.00
45		Chlorobenzene-d5 (I)	50.000	50.000	0.0	99	0.00
46		2-Chloroethyl Vinyl Ether	20.000	21.136	-5.7	101	0.00
47		c-1,3-Dichloropropene	20.000	20.950	-4.7	101	0.00
48	S	Toluene-d8 (S)	50.000	49.736	0.5	100	0.00
49	C	Toluene	20.000	19.771	1.1	99	0.00
50		Tetrachloroethene (PCE)	20.000	20.835	-4.2	100	0.00

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062035.D
Acq On : 21 Jun 2019 1:01 am
Operator : MM
Sample : 9F20044-ICV1
Misc : 1X 5mL 20/40PPB VOCR
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 10:40:31 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
51		4-Methyl-2-Pentanone (MIBK)	40.000	40.908	-2.3	100	0.00
52		t-1,3-Dichloropropene	20.000	21.671	-8.4	103	0.00
53		1,1,2-Trichloroethane	20.000	21.459	-7.3	102	0.00
54		Dibromochloromethane	20.000	21.192	-6.0	104	0.00
55		1,3-Dichloropropane	20.000	20.707	-3.5	101	0.00
56		1,2-Dibromoethane (EDB)	20.000	21.529	-7.6	100	0.00
57		2-Hexanone	40.000	40.738	-1.8	100	0.00
58	P	Chlorobenzene	20.000	21.135	-5.7	102	0.00
59	C	Ethylbenzene	20.000	20.865	-4.3	100	0.00
60		1,1,1,2-Tetrachloroethane	20.000	21.640	-8.2	102	0.00
61		m,p-Xylenes (2)	40.000	41.951	-4.9	101	0.00
62		o-Xylene	20.000	21.033	-5.2	100	0.00
63		Styrene	20.000	21.416	-7.1	100	0.00
64	P	Bromoform	20.000	21.073	-5.4	105	0.00
65		Isopropylbenzene	20.000	20.876	-4.4	99	0.00
66	I	1,4-Dichlorobenzene-d4 (I)	50.000	50.000	0.0	99	0.00
67	S	4-Bromofluorobenzene (S)	50.000	49.161	1.7	98	0.00
68		Bromobenzene	20.000	20.733	-3.7	100	0.00
69		n-Propylbenzene	20.000	20.613	-3.1	99	0.00
70	P	1,1,2,2-Tetrachloroethane	20.000	20.497	-2.5	98	0.00
71		2-Chlorotoluene	20.000	20.857	-4.3	100	0.00
72		1,3,5-Trimethylbenzene	20.000	20.749	-3.7	100	0.00
73		1,2,3-Trichloropropane	20.000	21.392	-7.0	101	0.00
74		t-1,4-Dichloro-2-butene	20.000	18.623	6.9	86	0.00
75		4-Chlorotoluene	20.000	20.810	-4.0	101	0.00
76		tert-Butylbenzene	20.000	20.656	-3.3	100	0.00
77		1,2,4-Trimethylbenzene	20.000	20.840	-4.2	99	0.00
78		sec-Butylbenzene	20.000	20.715	-3.6	100	0.00
79		4-Isopropyltoluene	20.000	21.320	-6.6	100	0.00
80		1,3-Dichlorobenzene	20.000	21.184	-5.9	102	0.00
81		1,4-Dichlorobenzene	20.000	20.576	-2.9	101	0.00
82		n-Butylbenzene	20.000	21.081	-5.4	99	0.00
83		1,2-Dichlorobenzene	20.000	20.994	-5.0	101	0.00
84		1,2-Dibromo-3-Chloropropane	20.000	20.985	-4.9	104	0.00
85		Hexachlorobutadiene	20.000	21.409	-7.0	97	0.00
86		1,2,4-Trichlorobenzene	20.000	21.203	-6.0	99	0.00
87		Naphthalene	20.000	21.172	-5.9	100	0.00
88		1,2,3-Trichlorobenzene	20.000	21.100	-5.5	100	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062036.D
Acq On : 21 Jun 2019 1:28 am
Operator : MM
Sample : 9F20044-ICV2
Misc : 1X 5mL 5/1250PPB OXY
ALS Vial : 20 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 10:40:57 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene (I)	50.000	50.000	0.0	98	0.00
2		Dichlorodifluoromethane	20.000	0.151	99.2#	1	0.00
3	P	Chloromethane	20.000	0.439	97.8#	2	0.00
4	C	Vinyl Chloride	20.000	0.160	99.2#	1	0.00
5		Bromomethane	20.000	0.584	97.1#	3	0.00
6		Chloroethane	20.000	0.438	97.8#	2	0.02
7		Trichlorofluoromethane	20.000	0.089	99.6#	0	0.01
8		Ethanol	1250.000	1332.917	-6.6	99	0.00
9	C	1,1-Dichloroethene	20.000	0.146	99.3#	1	0.00
10		Carbon Disulfide	20.000	0.505	97.5#	2	0.00
11		Freon 113	20.000	0.000	100.0#	0	-3.29#
12		Iodomethane	20.000	2.975	85.1#	2	0.00
13		Acrolein	20.000	0.000	100.0#	0	-3.63#
14		Methylene Chloride	20.000	-1.000	105.0#	7	0.00
15		Acetone	40.000	0.849	97.9#	2	0.02
16		t-1,2-Dichloroethene	20.000	0.285	98.6#	1	0.00
17		n-Hexane	20.000	0.000	100.0#	0	-4.12#
18		Methyl-tert-butyl-ether	20.000	0.069	99.7#	0	0.00
19		tert-Butanol (TBA)	1250.000	1346.739	-7.7	98	0.00
20		Diisopropyl ether (DIPE)	5.000	4.510	9.8	101	0.00
21	P	1,1-Dichloroethane	20.000	0.226	98.9#	1	0.00
22		Acrylonitrile	20.000	0.000	100.0#	0	-4.76#
23		Ethyl-tert-butyl ether (ET	5.000	4.600	8.0	98	0.00
24		Vinyl Acetate	20.000	0.859	95.7#	4	-0.02
25		c-1,2-Dichloroethene	20.000	0.214	98.9#	1	0.00
26		2,2-Dichloropropane	20.000	0.086	99.6#	0	0.00
27		Bromochloromethane	20.000	0.000	100.0#	0	-5.45#
28	C	Chloroform	20.000	0.239	98.8#	1	0.00
29		Carbon Tetrachloride	20.000	0.000	100.0#	0	-5.66#
30		Tetrahydrofuran	20.000	0.000	100.0#	0	-5.71#
31		1,1,1-Trichloroethane	20.000	0.091	99.5#	0	0.01
32	S	Dibromofluoromethane (S)	50.000	49.499	1.0	98	0.00
33		1,1-Dichloropropene	20.000	0.189	99.1#	1	0.00
34		2-Butanone (MEK)	40.000	0.000	100.0#	0	-5.86#
35		Benzene	20.000	0.224	98.9#	1	0.01
36		tert-Amyl methyl ether (TA	5.000	4.459	10.8	98	0.00
37		1,2-Dichloroethane (EDC)	20.000	0.126	99.4#	1	0.00
38		iso-Butyl Alcohol	500.000	63.312	87.3#	12	-0.12
39	S	1,4-Difluorobenzene (S)	50.000	50.206	-0.4	99	0.00
40		Trichloroethene (TCE)	20.000	0.233	98.8#	1	0.00
41		Tert-Amyl-Ethyl-Ether (TAEE	5.000	4.485	10.3	93	0.00
42		Dibromomethane	20.000	0.000	100.0#	0	-7.20#
43	C	1,2-Dichloropropane	20.000	0.158	99.2#	1	0.00
44		Bromodichloromethane	20.000	0.127	99.4#	1	0.00
45		Chlorobenzene-d5 (I)	50.000	50.000	0.0	96	0.00
46		2-Chloroethyl Vinyl Ether	20.000	0.000	100.0#	0	-8.03#
47		c-1,3-Dichloropropene	20.000	0.141	99.3#	1	0.00
48	S	Toluene-d8 (S)	50.000	49.809	0.4	97	0.00
49	C	Toluene	20.000	0.240	98.8#	1	0.00
50		Tetrachloroethene (PCE)	20.000	0.220	98.9#	1	0.00

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062036.D
Acq On : 21 Jun 2019 1:28 am
Operator : MM
Sample : 9F20044-ICV2
Misc : 1X 5mL 5/1250PPB OXY
ALS Vial : 20 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 10:40:57 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
51		4-Methyl-2-Pentanone (MIBK)	40.000	0.000	100.0#	0	-8.80#
52		t-1,3-Dichloropropene	20.000	0.114	99.4#	1	0.01
53		1,1,2-Trichloroethane	20.000	0.000	100.0#	0	-9.01#
54		Dibromochloromethane	20.000	0.000	100.0#	0	-9.19#
55		1,3-Dichloropropane	20.000	0.102	99.5#	0	0.00
56		1,2-Dibromoethane (EDB)	20.000	0.000	100.0#	0	-9.43#
57		2-Hexanone	40.000	0.080	99.8#	0	0.00
58	P	Chlorobenzene	20.000	0.287	98.6#	1	0.00
59	C	Ethylbenzene	20.000	0.239	98.8#	1	0.00
60		1,1,1,2-Tetrachloroethane	20.000	0.127	99.4#	1	0.00
61		m,p-Xylenes (2)	40.000	0.503	98.7#	1	0.00
62		o-Xylene	20.000	0.225	98.9#	1	0.00
63		Styrene	20.000	0.237	98.8#	1	0.00
64	P	Bromoform	20.000	0.000	100.0#	0	-10.54#
65		Isopropylbenzene	20.000	0.196	99.0#	1	0.00
66	I	1,4-Dichlorobenzene-d4 (I)	50.000	50.000	0.0	91	0.00
67	S	4-Bromofluorobenzene (S)	50.000	51.306	-2.6	93	0.00
68		Bromobenzene	20.000	0.264	98.7#	1	0.00
69		n-Propylbenzene	20.000	0.264	98.7#	1	0.00
70	P	1,1,2,2-Tetrachloroethane	20.000	0.000	100.0#	0	-11.14#
71		2-Chlorotoluene	20.000	0.174	99.1#	1	0.00
72		1,3,5-Trimethylbenzene	20.000	0.256	98.7#	1	0.00
73		1,2,3-Trichloropropane	20.000	0.000	100.0#	0	-11.25#
74		t-1,4-Dichloro-2-butene	20.000	0.000	100.0#	0	-11.28#
75		4-Chlorotoluene	20.000	0.325	98.4#	1	0.00
76		tert-Butylbenzene	20.000	0.226	98.9#	1	0.00
77		1,2,4-Trimethylbenzene	20.000	0.288	98.6#	1	0.00
78		sec-Butylbenzene	20.000	0.239	98.8#	1	0.00
79		4-Isopropyltoluene	20.000	0.288	98.6#	1	0.00
80		1,3-Dichlorobenzene	20.000	0.348	98.3#	2	0.00
81		1,4-Dichlorobenzene	20.000	0.358	98.2#	2	0.00
82		n-Butylbenzene	20.000	0.368	98.2#	2	0.00
83		1,2-Dichlorobenzene	20.000	0.290	98.6#	1	0.00
84		1,2-Dibromo-3-Chloropropane	20.000	0.000	100.0#	0	-12.81#
85		Hexachlorobutadiene	20.000	0.746	96.3#	3	0.00
86		1,2,4-Trichlorobenzene	20.000	0.592	97.0#	3	0.00
87		Naphthalene	20.000	0.392	98.0#	2	0.00
88		1,2,3-Trichlorobenzene	20.000	0.528	97.4#	2	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 6

Calibration Status Report VOA-GCMS9

Method Path : C:\msdchem\1\methods\
Method File : VI190621G.M
Title : NWTPH-Gx by GC/MS
Last Update : Fri Jun 21 11:04:13 2019
Response Via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	50	50	50	C:\msdchem\1\data\2019-06\9F20044\VI19062042.D
2	100	100	50	C:\msdchem\1\data\2019-06\9F20044\VI19062043.D
3	250	250	50	C:\msdchem\1\data\2019-06\9F20044\VI19062044.D
4	500	500	50	C:\msdchem\1\data\2019-06\9F20044\VI19062045.D
5	1000	1000	50	C:\msdchem\1\data\2019-06\9F20044\VI19062046.D
6	2500	2500	50	C:\msdchem\1\data\2019-06\9F20044\VI19062047.D
7	5000	5000	50	C:\msdchem\1\data\2019-06\9F20044\VI19062048.D
8	10K	10000	50	C:\msdchem\1\data\2019-06\9F20044\VI19062049.D

#	ID	Update Time	Quant Time	Acquisition Time
1	50	Jun 21 11:04 2019	Jun 21 10:59 2019	21 Jun 2019 4:10 am
2	100	Jun 21 11:04 2019	Jun 21 10:59 2019	21 Jun 2019 4:37 am
3	250	Jun 21 11:04 2019	Jun 21 10:59 2019	21 Jun 2019 5:04 am
4	500	Jun 21 11:04 2019	Jun 21 10:59 2019	21 Jun 2019 5:31 am
5	1000	Jun 21 11:04 2019	Jun 21 10:59 2019	21 Jun 2019 5:58 am
6	2500	Jun 21 11:04 2019	Jun 21 10:59 2019	21 Jun 2019 6:25 am
7	5000	Jun 21 11:04 2019	Jun 21 10:59 2019	21 Jun 2019 6:52 am
8	10K	Jun 21 11:04 2019	Jun 21 10:59 2019	21 Jun 2019 7:19 am

VI190621G.M Fri Jun 21 11:10:06 2019

Method Path : C:\msdchem\1\methods\
Method File : VI190621G.M
Title : NWTPH-Gx by GC/MS
Last Update : Fri Jun 21 11:04:13 2019
Response Via : Initial Calibration

Calibration Files
50 =VI19062042.D 100 =VI19062043.D 250 =VI19062044.D 500 =VI19062045.D 1000=VI19062046.D 2500=VI19062047.D
5000=VI19062048.D 10K =VI19062049.D

		Compound	50	100	250	500	1000	2500	5000	10K	Avg	%RSD
1)	I	Pentafluorobenzene...	ISTD									
2)	S	1,4-Difluorobe...	1.674	1.679	1.674	1.666	1.685	1.668	1.694	1.713	1.682	0.93
3)	S	4-Bromofluorob...	0.566	0.572	0.568	0.582	0.586	0.593	0.604	0.606	0.585	2.64
4)	H	NWTPH-Gx (TPH)	0.868	1.298	1.446	1.577	1.545	1.638	1.731	1.724	1.478	19.30
5)	H	TPHg (C5-C9)	3.161	2.665	2.296	2.197	2.072	2.099	2.132	2.116	2.342	16.33
6)	H	TPHg (C6-C10)	2.644	2.253	1.930	1.868	1.761	1.775	1.804	1.803	1.980	15.77
7)	H	CA-LUFT (C5-C12)	3.557	3.029	2.649	2.602	2.468	2.537	2.603	2.593	2.755	13.25
8)		Benzene (NR)									0.000	-1.00
9)	S	Toluene-d8 (NR)									0.000	-1.00
10)		Toluene (NR)									0.000	-1.00
11)	S	Chlorobenzene-...									0.000	-1.00
12)	S	1,4-Dichlorobe...									0.000	-1.00
13)		Naphthalene (NR)									0.000	-1.00

(#) = Out of Range

Compound List Report VOA-GCMS9

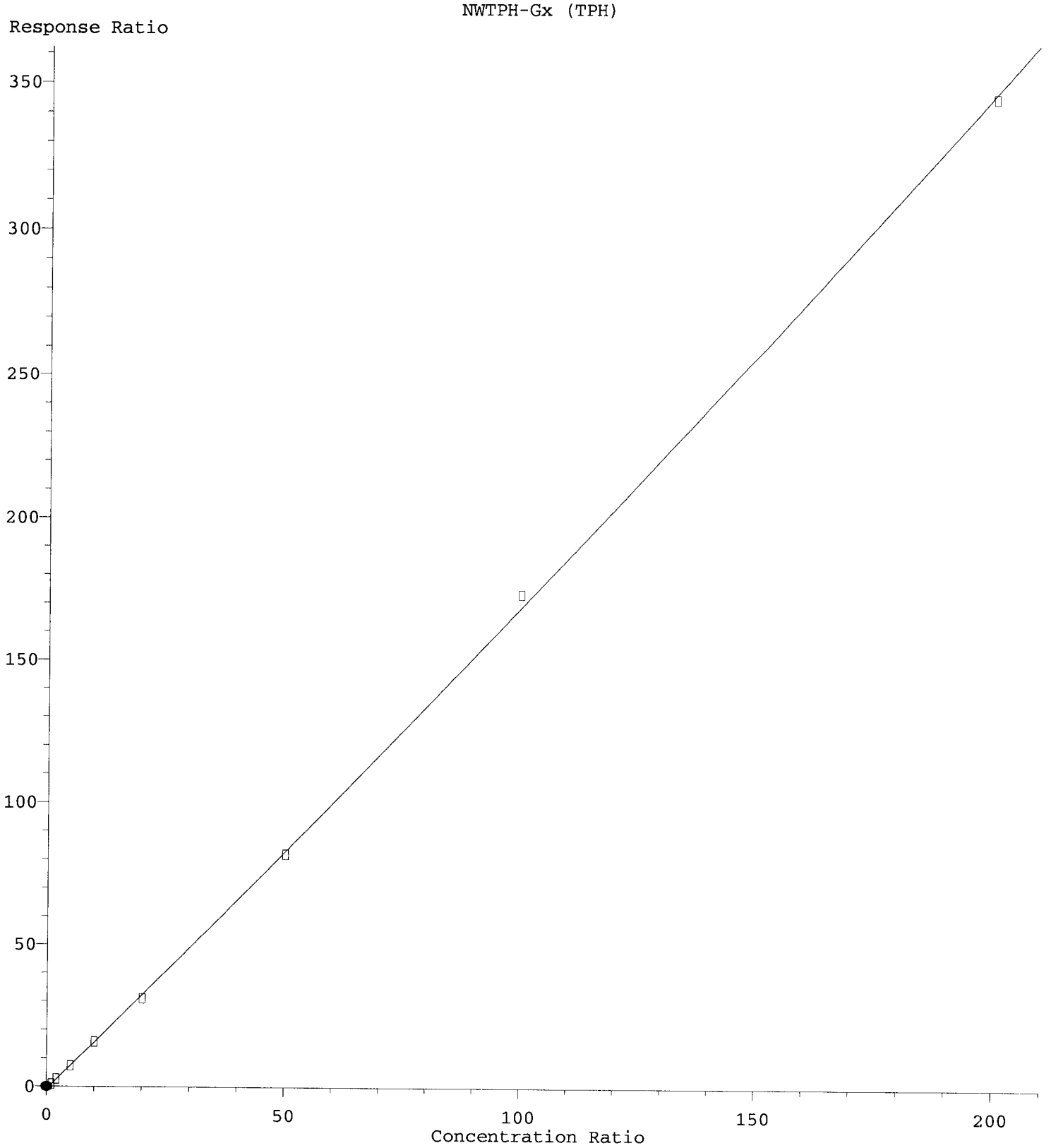
Method Path : C:\msdchem\1\methods\
Method File : VI190621G.M
Title : NWTPH-Gx by GC/MS
Last Update : Fri Jun 21 11:04:13 2019
Response Via : Initial Calibration

Total Cpnds : 13

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	Pentafluorobenzene (IS)	168	6.223	1.000	A	2	A	B
2	S	1,4-Difluorobenzene (Sur)	114	6.789	1.091	A	2	A	B
3	S	4-Bromofluorobenzene (Sur)	174	10.980	1.764	A	2	A	B
4	H	NWTPH-Gx (TPH)	TIC	9.890	1.589	Q	0	A	B
5	H	TPHg (C5-C9)	TIC	9.890	1.589	Q	0	A	B
6	H	TPHg (C6-C10)	TIC	9.890	1.589	Q	0	A	B
7	H	CA-LUFT (C5-C12)	TIC	9.890	1.589	Q	0	A	B
8		Benzene (NR)	78	6.132	0.985	A	2	A	B
9	S	Toluene-d8 (NR)	98	8.304	1.334	A	2	A	B
10		Toluene (NR)	91	8.364	1.344	A	2	A	B
11	S	Chlorobenzene-d5 (NR)	117	9.916	1.593	A	2	A	B
12	S	1,4-Dichlorobenzene-d4 (NR)	150	11.856	1.905	A	2	A	B
13		Naphthalene (NR)	128	13.633	2.191	A	2	A	B

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

VI190621G.M Fri Jun 21 11:10:00 2019

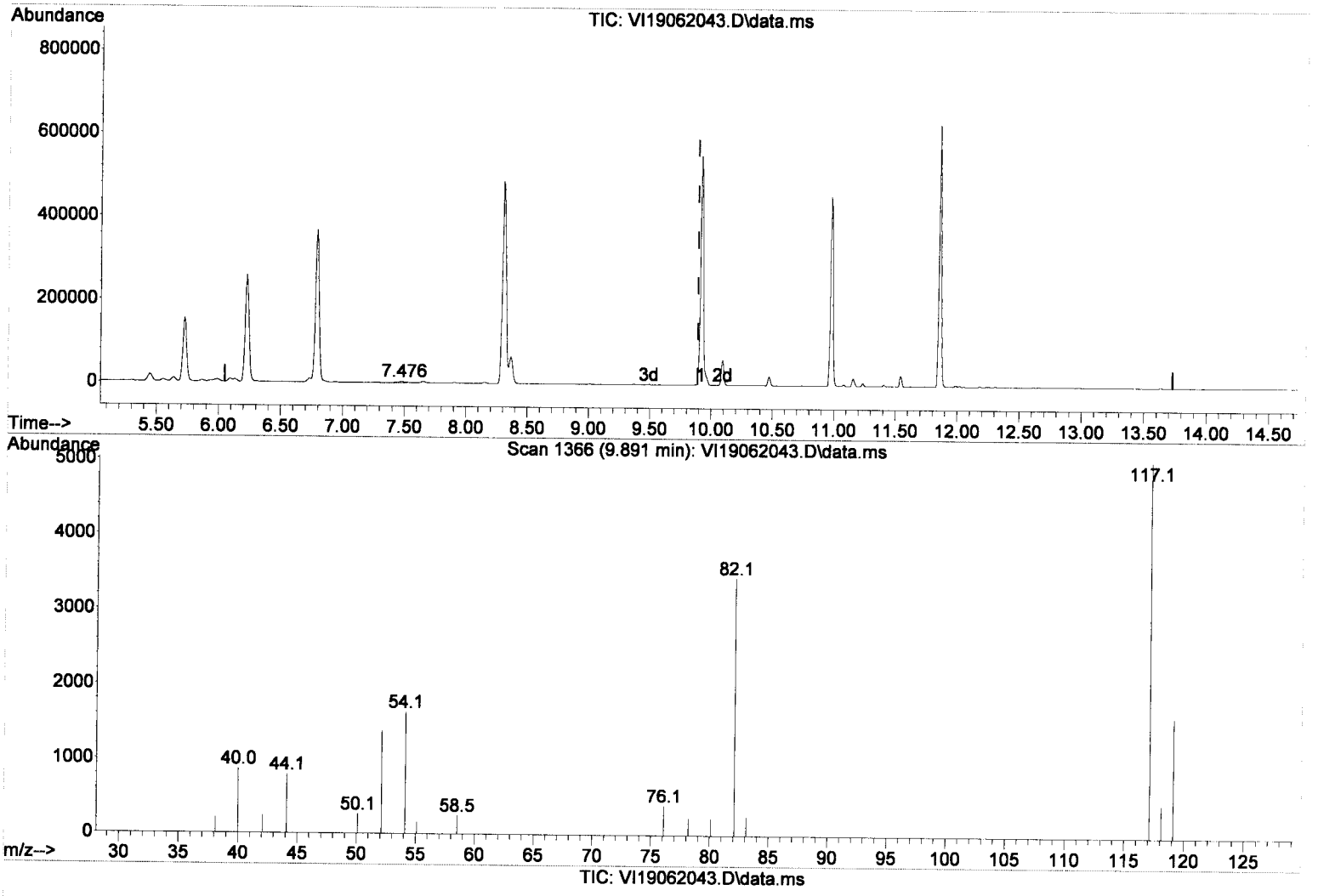


R = 4.10e-004 A*A + 1.65e+000 A - 8.33e-001
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)
Method Name: C:\msdchem\1\methods\VI190621G.M
Calibration Table Last Updated: Fri Jun 21 11:04:13 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F20044\REQUANT\
Data File : VI19062043.D
Acq On : 21 Jun 2019 4:37 am
Operator : MM
Sample : 9F20044-CALD
Misc : 1X 5mL 100PPB GX
ALS Vial : 27 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 11:06:13 2019
Quant Method : C:\msdchem\1\methods\VI190621G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Jun 21 11:04:13 2019
Response via : Initial Calibration

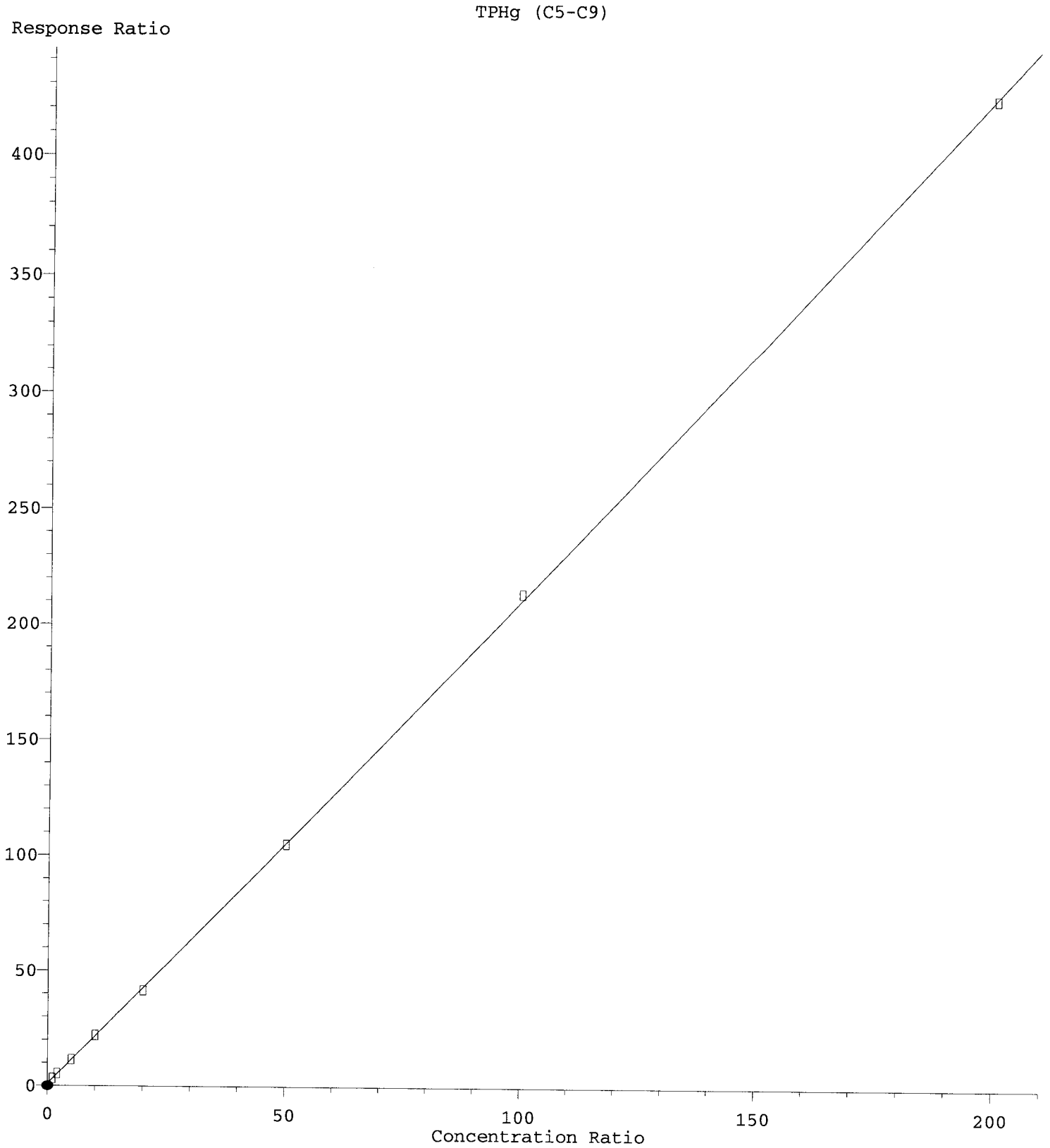


(4) NWTPH-Gx (TPH) (H)

9.890min (0.000) 29.43 ug/L m

response 27765

Signal	Exp%	Act%
TIC	100.00	100.00
0.00	0.00	1.92#
0.00	0.00	1.53#
0.00	0.00	0.00

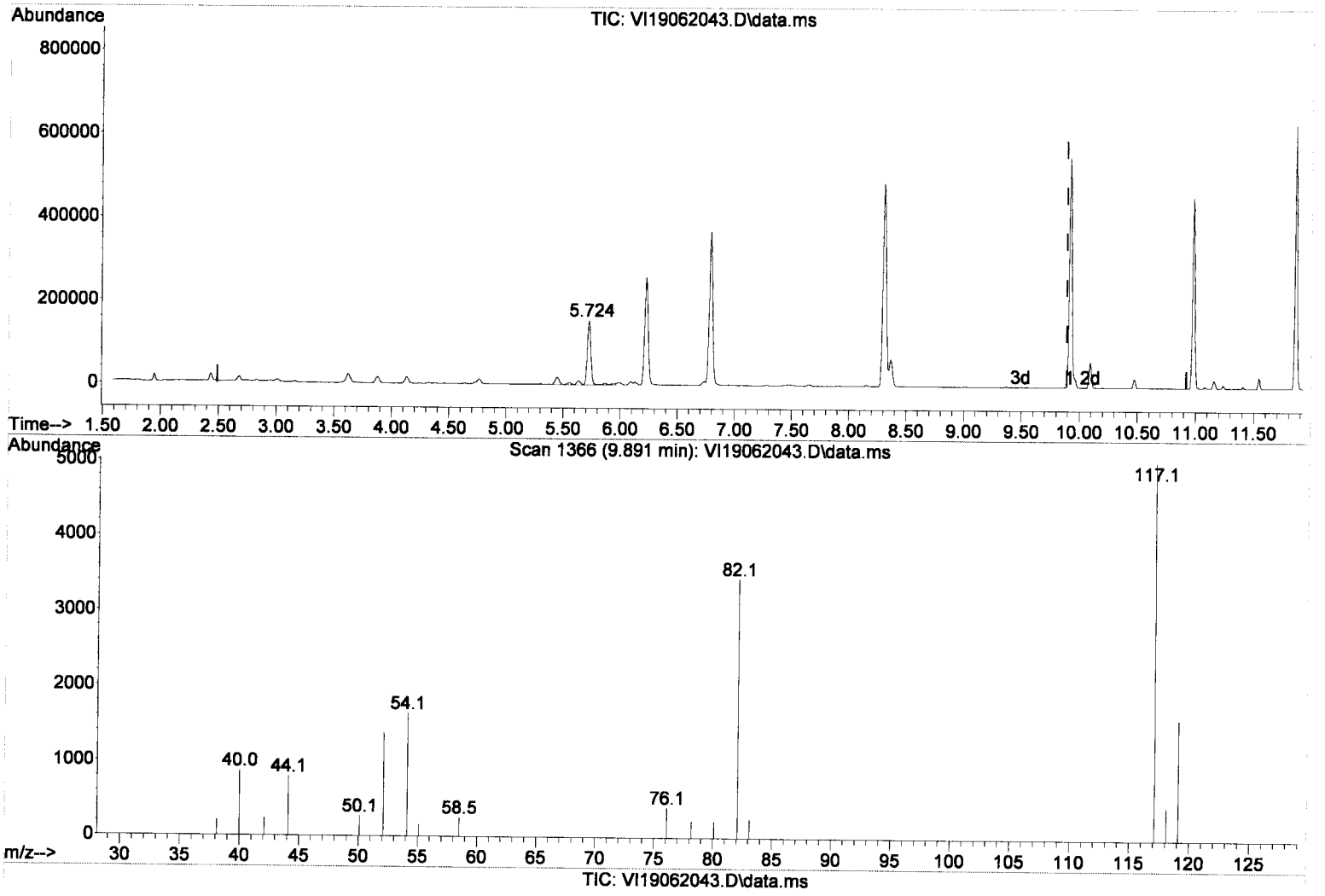


R = 1.98e-004 A*A + 2.08e+000 A + 1.09e+000
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)
Method Name: C:\msdchem\1\methods\V119062IG.M
Calibration Table Last Updated: Fri Jun 21 11:04:40 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F20044\REQUANT\
Data File : VI19062043.D
Acq On : 21 Jun 2019 4:37 am
Operator : MM
Sample : 9F20044-CALD
Misc : 1X 5mL 100PPB GX
ALS Vial : 27 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 11:06:13 2019
Quant Method : C:\msdchem\1\methods\VI190621G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Jun 21 11:04:13 2019
Response via : Initial Calibration

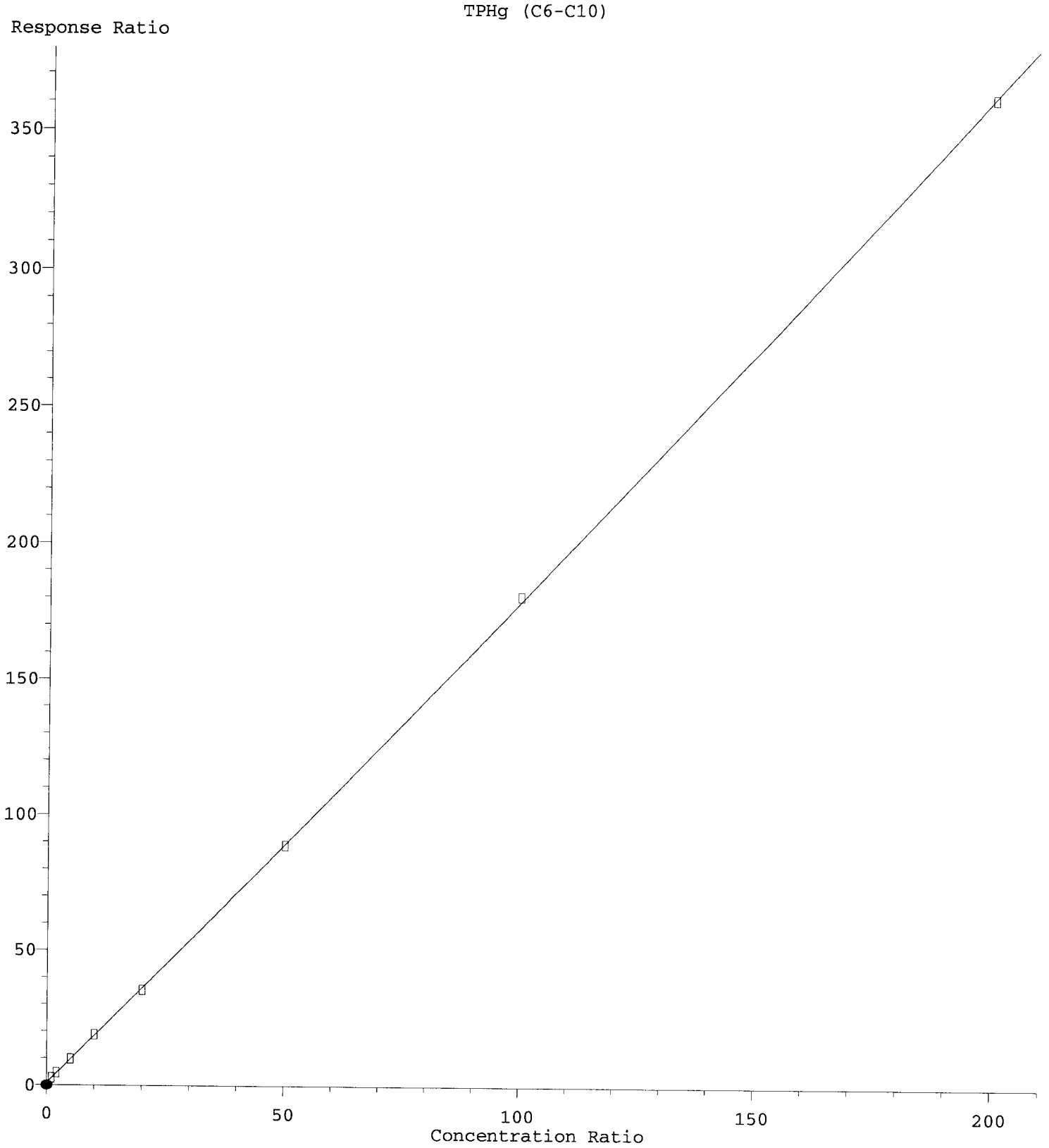


(5) TPHg (C5-C9) (H)

9.890min (0.000) 27.57 ug/L m

response 439094

Signal	Exp%	Act%
TIC	100.00	100.00
0.00	0.00	0.12#
0.00	0.00	0.10#
0.00	0.00	0.00

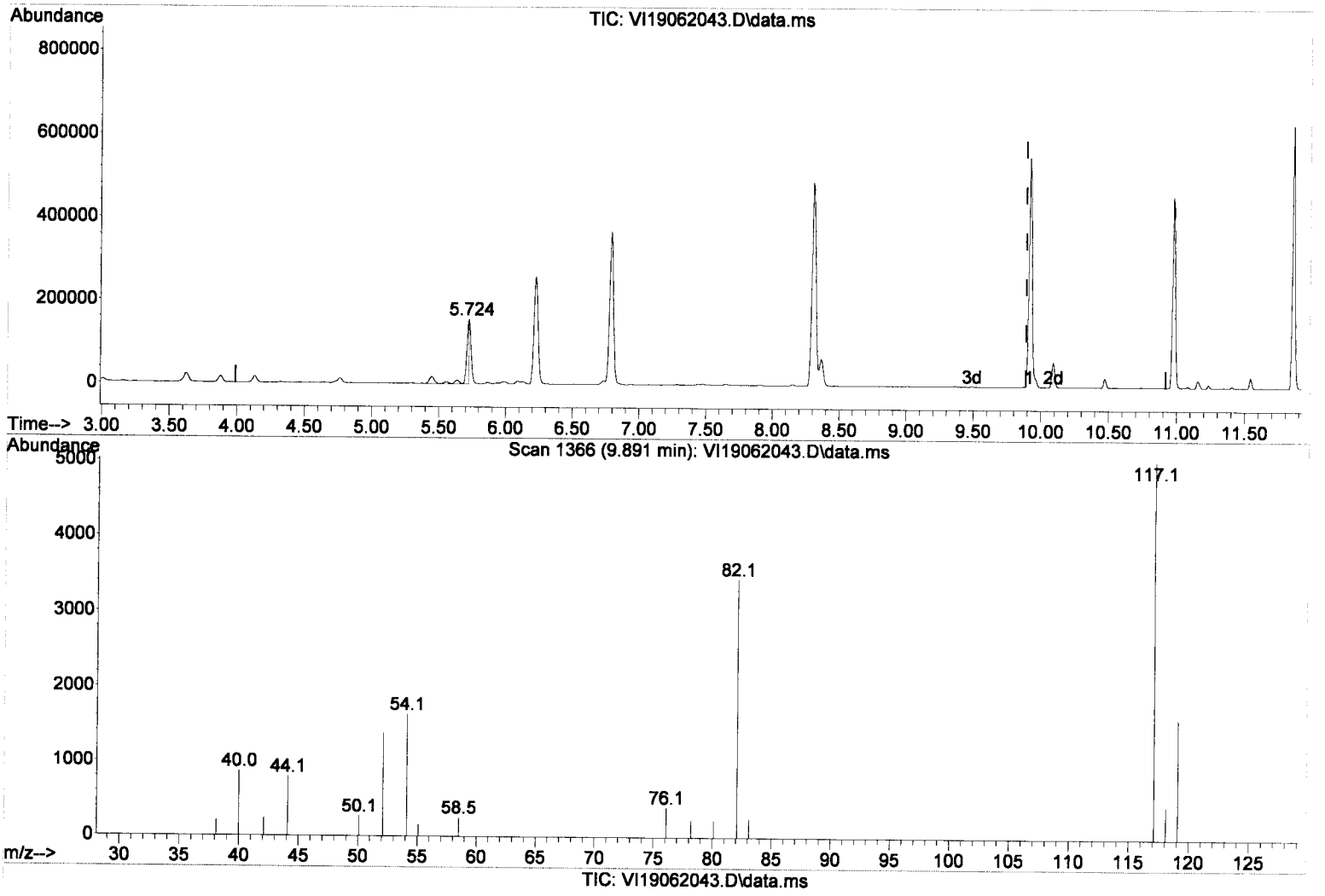


R = 2.42e-004 A*A + 1.75e+000 A + 9.10e-001
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)
Method Name: C:\msdchem\1\methods\VI190621G.M
Calibration Table Last Updated: Fri Jun 21 11:04:48 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F20044\REQUANT\
Data File : VI19062043.D
Acq On : 21 Jun 2019 4:37 am
Operator : MM
Sample : 9F20044-CALD
Misc : 1X 5mL 100PPB GX
ALS Vial : 27 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 11:06:13 2019
Quant Method : C:\msdchem\1\methods\VI190621G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Jun 21 11:04:13 2019
Response via : Initial Calibration

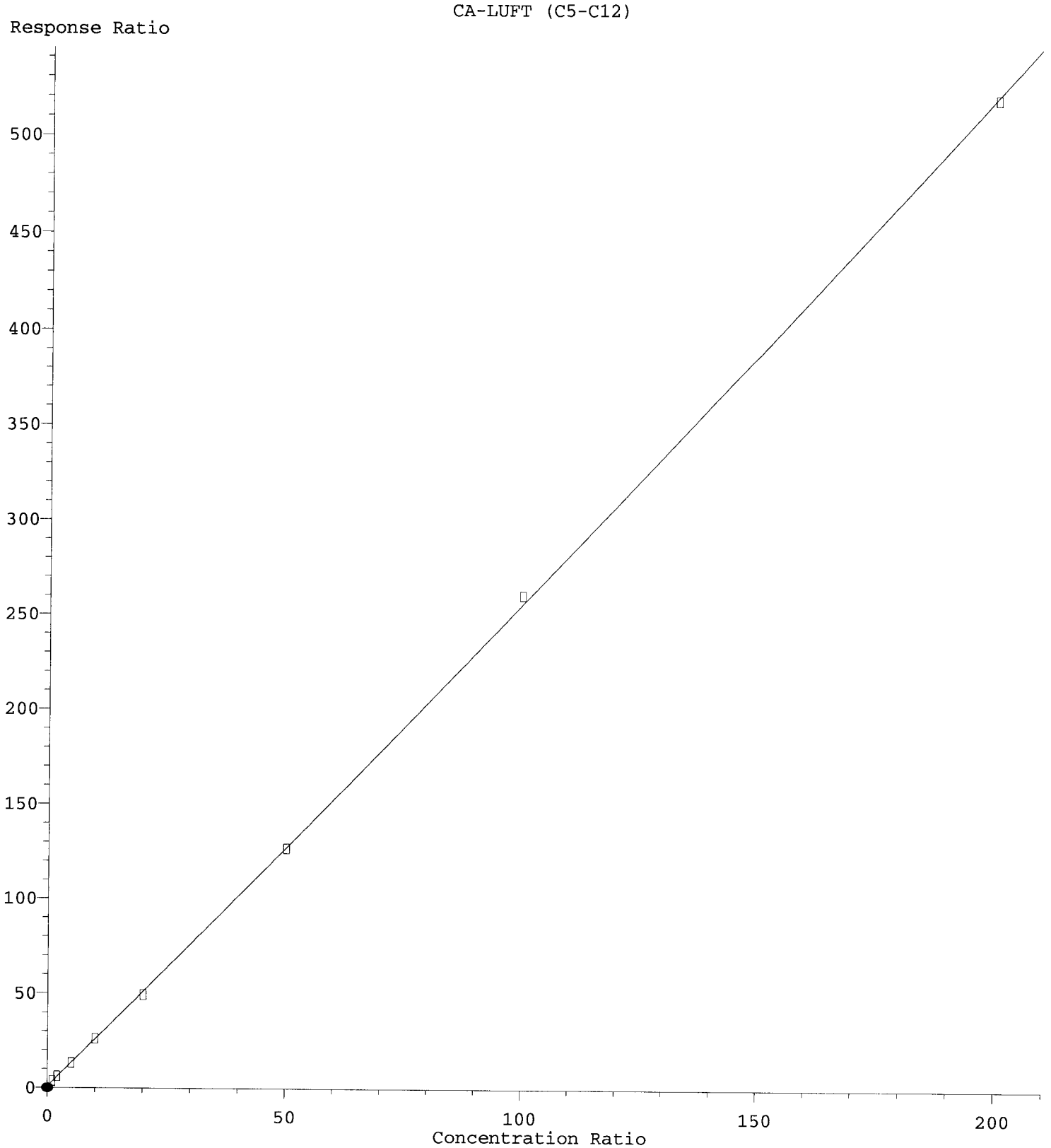


(6) TPHg (C6-C10) (H)

9.890min (0.000) 13.48 ug/L m

response 271802

Signal	Exp%	Act%
TIC	100.00	100.00
0.00	0.00	0.20#
0.00	0.00	0.16#
0.00	0.00	0.00

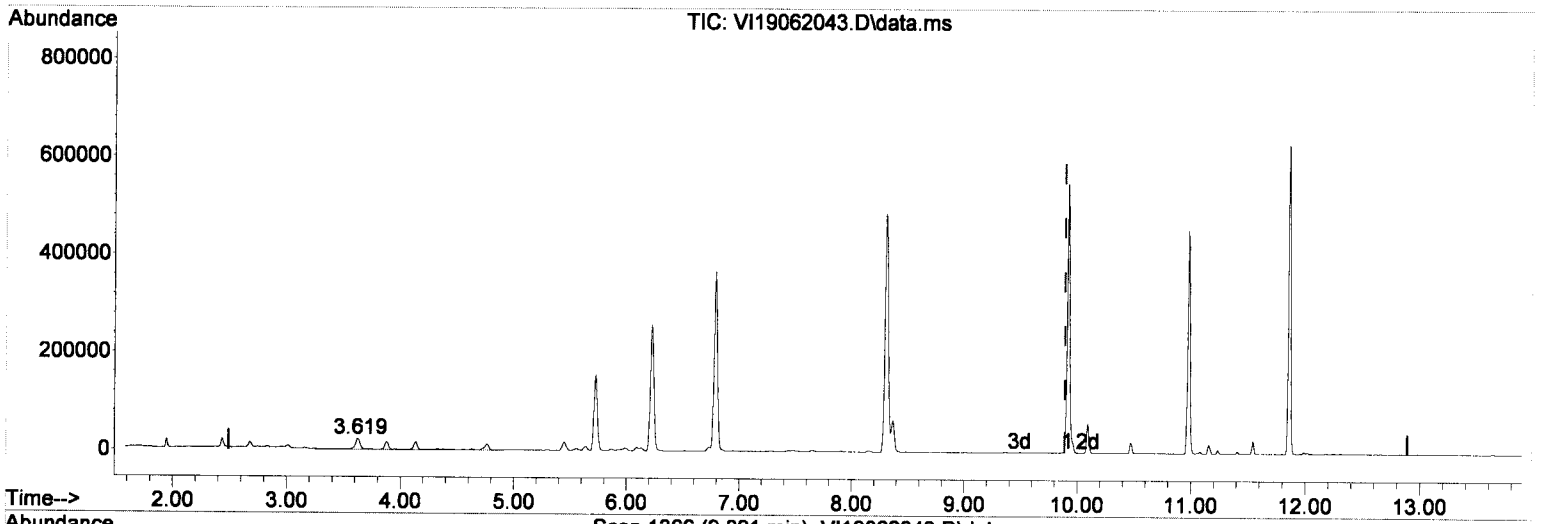


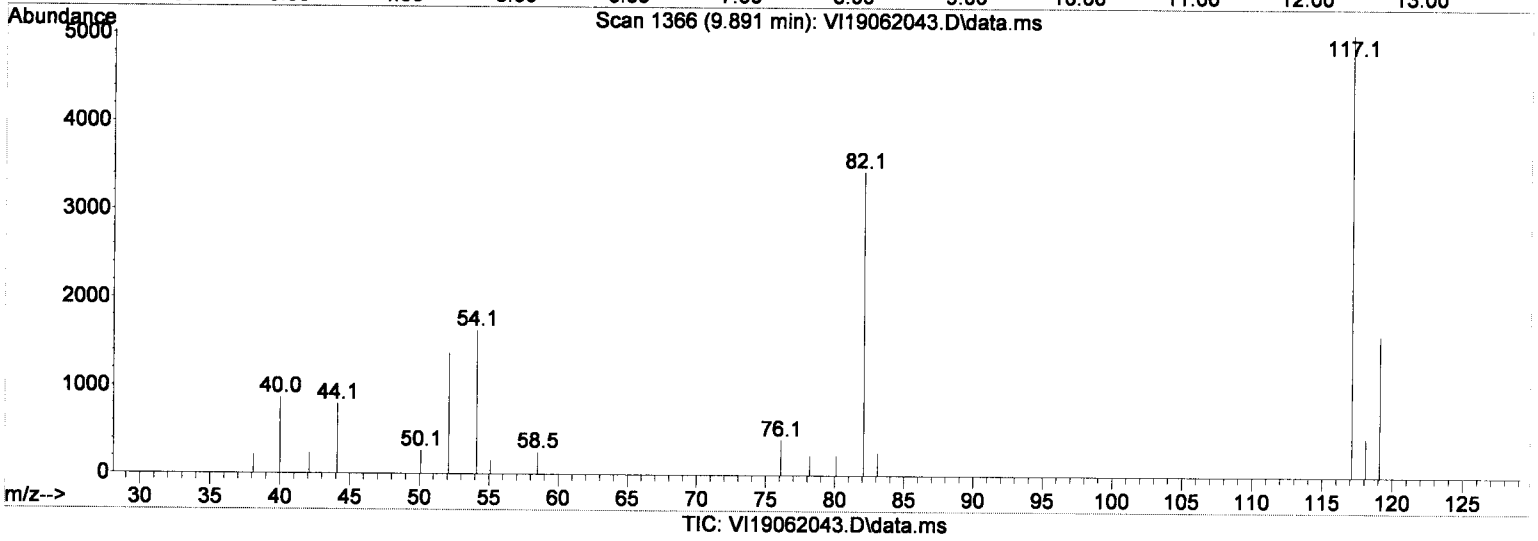
R = 4.71e-004 A*A + 2.50e+000 A + 9.71e-001
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)
Method Name: C:\msdchem\1\methods\vi190621g.m
Calibration Table Last Updated: Fri Jun 21 11:04:48 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F20044\REQUANT\
Data File : VI19062043.D
Acq On : 21 Jun 2019 4:37 am
Operator : MM
Sample : 9F20044-CALD
Misc : 1X 5mL 100PPB GX
ALS Vial : 27 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 11:06:13 2019
Quant Method : C:\msdchem\1\methods\VI190621G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Jun 21 11:04:13 2019
Response via : Initial Calibration





(7) CA-LUFT (C5-C12) (H)

9.890min (0.000) 4.29 ug/L m

response 233055

Signal	Exp%	Act%
TIC	100.00	100.00
0.00	0.00	0.23#
0.00	0.00	0.18#
0.00	0.00	0.00

CALIBRATION SEQUENCE REVIEW SHEET

SEQUENCE: 9F20044

Analysis Included
8015D-Mod Gasoline (C6-C10) by GC/MS
CA LUFT GRO
NWTPH-Gx

INSTRUMENT SEQUENCE LOG

SampleID	SampleName	Matrix	STDID	ISTD ID	Analyzed	
9F20044-TUN2	MS Tune	Water		A19C125	6/21/2019	2:22:00AM
9F20044-ICB2	Initial Cal Blank	Water		A19E148	6/21/2019	3:43:00AM
9F20044-CALC	Cal Standard	Water	A19F179	"	6/21/2019	4:10:00AM
9F20044-CALD	Cal Standard	Water	A19F176	"	6/21/2019	4:37:00AM
9F20044-CALE	Cal Standard	Water	A19F177	"	6/21/2019	5:04:00AM
9F20044-CALF	Cal Standard	Water	A19F178	"	6/21/2019	5:31:00AM
9F20044-CALG	Cal Standard	Water	A19F180	"	6/21/2019	5:58:00AM
9F20044-CALH	Cal Standard	Water	A19F181	"	6/21/2019	6:25:00AM
9F20044-CALI	Cal Standard	Water	A19F182	"	6/21/2019	6:52:00AM
9F20044-CALJ	Cal Standard	Water	A19F183	"	6/21/2019	7:19:00AM
9F20044-ICV3	Initial Cal Check	Water	A19B262	"	6/21/2019	8:40:00AM

CALIBRATION STANDARD RECOVERIES

Calibration: **A9F2102** Instrument: **VOA-GCMS9**

8015D-Mod Gasoline (C6-C10 Sequence: **9F20044** Matrix: **Water**

9F20044-CALC	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9F20044-CALD	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9F20044-CALE	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9F20044-CALF	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9F20044-CALG	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9F20044-CALH	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9F20044-CALI	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9F20044-CALJ	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**

Compounds listed above have recalculated recoveries outside 70-130% of the true values, and the calibration levels are above the reporting level. If no compounds are listed, all are OK. Please see the next section for quadatic fit compounds.

CALIBRATION SEQUENCE REVIEW SHEET

SEQUENCE: 9F20044

Analytes With Quadratic Curve Fits

Qualifier	iMDL	iMRL	Spike Amt	%Difference	OK?	Raise MRL to ?
				———	☐	☐ ———

Analytes listed above have quadratic curve fits. If they are using a weighting otpion, they must be checked against the requanted curve points to determine if the recalculated results are within limits (70-130 or as specified).

ICV RECOVERIES

Calibration: **A9F2102** Instrument: **VOA-GCMS9**

NWTPH-Gx Sequence: **9F20044** Matrix: **Water**

9F20044-ICV3	Inst. MRL	ICV Level	Result	%Rec.	Qual

Compounds listed above have Initial Calibration Verification standard recoveries outside 70-130% of the true values. If no compounds are listed, all have passing recoveries.

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062052.D
Acq On : 21 Jun 2019 8:40 am
Operator : MM
Sample : 9F20044-ICV3
Misc : 1X 5mL 500PPB GX
ALS Vial : 36 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 11:09:25 2019
Quant Method : C:\msdchem\1\methods\VI190621G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Jun 21 11:04:13 2019
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene (IS)	50.000	50.000	0.0	108	0.00
2	S	1,4-Difluorobenzene (Sur)	50.000	49.936	0.1	109	0.00
3	S	4-Bromofluorobenzene (Sur)	50.000	49.723	0.6	108	0.00
4	H	NWTPH-Gx (TPH)	500.000	491.693	1.7	106	0.00
5	H	TPHg (C5-C9)	500.000	469.246	6.2	101	0.00
6	H	TPHg (C6-C10)	500.000	488.486	2.3	104	0.00
7	H	CA-LUFT (C5-C12)	500.000	468.941	6.2	101	0.00
8		Benzene (NR)	-1.000	0.000	0.0	106	0.00
9	S	Toluene-d8 (NR)	-1.000	0.000	0.0	107	0.00
10		Toluene (NR)	-1.000	0.000	0.0	108	0.00
11	S	Chlorobenzene-d5 (NR)	-1.000	0.000	0.0	108	0.00
12	S	1,4-Dichlorobenzene-d4 (NR)	-1.000	0.000	0.0	107	0.00
13		Naphthalene (NR)	-1.000	0.000	0.0	125	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

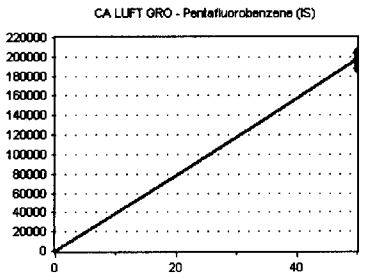
Element Calibration Review Sheet

Calibration ID: **A9F2102** Instrument: **VOA-GCMS9** Calibration Date: **06/21/2019**

Analysis: **CA LUFT GRO** Instrument Cal ID: **VI190621W+.M VI190621G.I**

Pentafluorobenzene (IS)

Curve Fit: **AVERAGE RF**

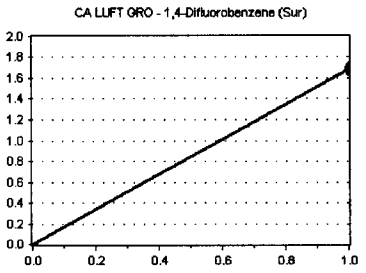


Standard	Concentration	Response	Response Factor	RT
9F20044-CALC	50	203678	4073.560	6.22
9F20044-CALD	50	196555	3931.100	6.22
9F20044-CALE	50	194307	3886.140	6.22
9F20044-CALF	50	193440	3868.800	6.22
9F20044-CALG	50	188214	3764.280	6.22
9F20044-CALH	50	197104	3942.080	6.22
9F20044-CALI	50	197272	3945.440	6.22
9F20044-CALJ	50	203972	4079.440	6.22

AVE RF **3936.355** RF RSD **2.65** AVE RT **6.22**

1,4-Difluorobenzene (Sur)

Curve Fit: **AVERAGE RF**

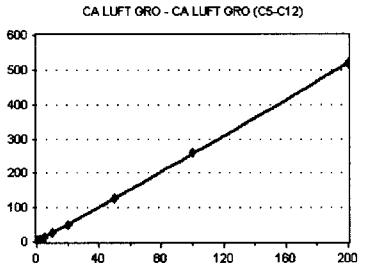


Standard	Concentration	Response	Response Factor	RT
9F20044-CALC	50	341047	1.674	6.79
9F20044-CALD	50	330061	1.679	6.79
9F20044-CALE	50	325280	1.674	6.79
9F20044-CALF	50	322266	1.666	6.79
9F20044-CALG	50	317178	1.685	6.79
9F20044-CALH	50	328682	1.668	6.79
9F20044-CALI	50	334265	1.694	6.79
9F20044-CALJ	50	349364	1.713	6.78

AVE RF **1.682** RF RSD **0.93** AVE RT **6.79**

CA LUFT GRO (C5-C12)

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

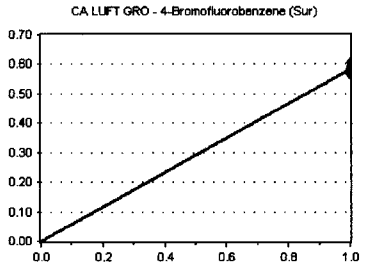


Standard	Concentration	Response	Response Factor	RT
9F20044-CALC	50	724537	3.557	9.89
9F20044-CALD	100	1190862	3.029	9.89
9F20044-CALE	250	2573247	2.649	9.89
9F20044-CALF	500	5033567	2.602	9.89
9F20044-CALG	1000	9289018	2.468	9.89
9F20044-CALH	2500	2.500336E+07	2.537	9.89
9F20044-CALI	5000	5.134156E+07	2.603	9.89
9F20044-CALJ	10000	1.0578E+08	2.593	9.89

AVE RF **2.755** RF RSD **13.25** AVE RT **9.89**

4-Bromofluorobenzene (Sur)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9F20044-CALC	50	115213	0.566	10.98
9F20044-CALD	50	112452	0.572	10.98
9F20044-CALE	50	110399	0.568	10.98
9F20044-CALF	50	112659	0.582	10.98
9F20044-CALG	50	110284	0.586	10.98
9F20044-CALH	50	116804	0.593	10.98
9F20044-CALI	50	119127	0.604	10.98
9F20044-CALJ	50	123534	0.606	10.98

AVE RF **0.585** RF RSD **2.64** AVE RT **10.98**

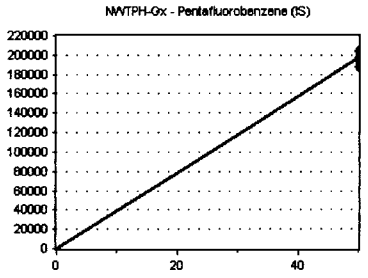
Element Calibration Review Sheet

Calibration ID: **A9F2102** Instrument: **VOA-GCMS9** Calibration Date: **06/21/2019**

Analysis: **NWTPH-Gx** Instrument Cal ID: **VI190621W+.M VI190621G.I**

Pentafluorobenzene (IS)

Curve Fit: **AVERAGE RF**

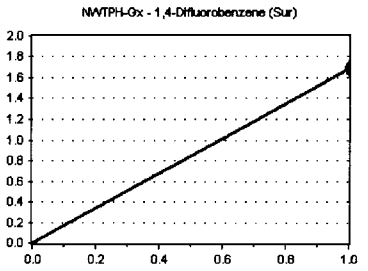


Standard	Concentration	Response	Response Factor	RT
9F20044-CALC	50	203678	4073.560	6.22
9F20044-CALD	50	196555	3931.100	6.22
9F20044-CALE	50	194307	3886.140	6.22
9F20044-CALF	50	193440	3868.800	6.22
9F20044-CALG	50	188214	3764.280	6.22
9F20044-CALH	50	197104	3942.080	6.22
9F20044-CALI	50	197272	3945.440	6.22
9F20044-CALJ	50	203972	4079.440	6.22

AVE RF **3936.355** RF RSD **2.65** AVE RT **6.22**

1,4-Difluorobenzene (Sur)

Curve Fit: **AVERAGE RF**

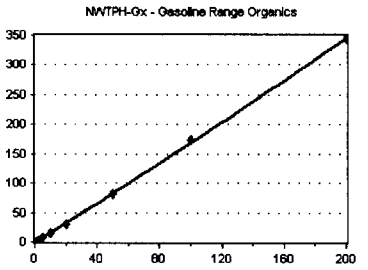


Standard	Concentration	Response	Response Factor	RT
9F20044-CALC	50	341047	1.674	6.79
9F20044-CALD	50	330061	1.679	6.79
9F20044-CALE	50	325280	1.674	6.79
9F20044-CALF	50	322266	1.666	6.79
9F20044-CALG	50	317178	1.685	6.79
9F20044-CALH	50	328682	1.668	6.79
9F20044-CALI	50	334265	1.694	6.79
9F20044-CALJ	50	349364	1.713	6.78

AVE RF **1.682** RF RSD **0.93** AVE RT **6.79**

Gasoline Range Organics

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

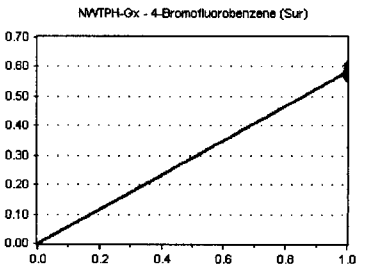


Standard	Concentration	Response	Response Factor	RT
9F20044-CALC	50	176842	0.868	9.89
9F20044-CALD	100	510164	1.298	9.89
9F20044-CALE	250	1404577	1.446	9.89
9F20044-CALF	500	3050984	1.577	9.89
9F20044-CALG	1000	5817074	1.545	9.89
9F20044-CALH	2500	1.613806E+07	1.638	9.89
9F20044-CALI	5000	3.415482E+07	1.731	9.89
9F20044-CALJ	10000	7.031796E+07	1.724	9.89

AVE RF **1.478** RF RSD **19.30** AVE RT **9.89**

4-Bromofluorobenzene (Sur)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9F20044-CALC	50	115213	0.566	10.98
9F20044-CALD	50	112452	0.572	10.98
9F20044-CALE	50	110399	0.568	10.98
9F20044-CALF	50	112659	0.582	10.98
9F20044-CALG	50	110284	0.586	10.98
9F20044-CALH	50	116804	0.593	10.98
9F20044-CALI	50	119127	0.604	10.98
9F20044-CALJ	50	123534	0.606	10.98

AVE RF **0.585** RF RSD **2.64** AVE RT **10.98**

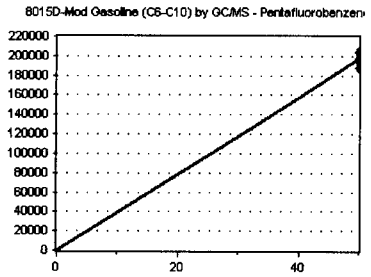
Element Calibration Review Sheet

Calibration ID: **A9F2102** Instrument: **VOA-GCMS9** Calibration Date: **06/21/2019**

Analysis: **8015D-Mod Gasoline (C6-C1** Instrument Cal ID: **VI190621W+.M VI190621G.I**

Pentafluorobenzene (IS)

Curve Fit: **AVERAGE RF**

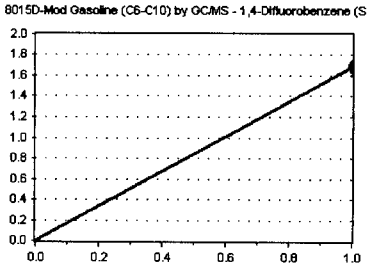


Standard	Concentration	Response	Response Factor	RT
9F20044-CALC	50	203678	4073.560	6.22
9F20044-CALD	50	196555	3931.100	6.22
9F20044-CALE	50	194307	3886.140	6.22
9F20044-CALF	50	193440	3868.800	6.22
9F20044-CALG	50	188214	3764.280	6.22
9F20044-CALH	50	197104	3942.080	6.22
9F20044-CALI	50	197272	3945.440	6.22
9F20044-CALJ	50	203972	4079.440	6.22

AVE RF **3936.355** RF RSD **2.65** AVE RT **6.22**

1,4-Difluorobenzene (Sur)

Curve Fit: **AVERAGE RF**

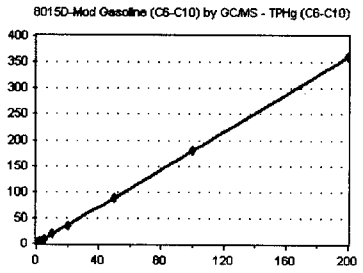


Standard	Concentration	Response	Response Factor	RT
9F20044-CALC	50	341047	1.674	6.79
9F20044-CALD	50	330061	1.679	6.79
9F20044-CALE	50	325280	1.674	6.79
9F20044-CALF	50	322266	1.666	6.79
9F20044-CALG	50	317178	1.685	6.79
9F20044-CALH	50	328682	1.668	6.79
9F20044-CALI	50	334265	1.694	6.79
9F20044-CALJ	50	349364	1.713	6.78

AVE RF **1.682** RF RSD **0.93** AVE RT **6.79**

TPHg (C6-C10)

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

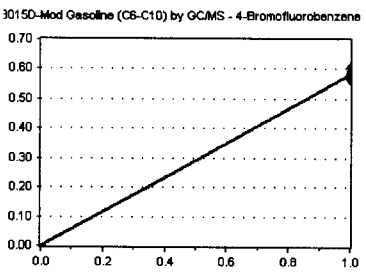


Standard	Concentration	Response	Response Factor	RT
9F20044-CALC	50	538437	2.644	9.89
9F20044-CALD	100	885590	2.253	9.89
9F20044-CALE	250	1874608	1.930	9.89
9F20044-CALF	500	3614041	1.868	9.89
9F20044-CALG	1000	6627134	1.761	9.89
9F20044-CALH	2500	1.749223E+07	1.775	9.89
9F20044-CALI	5000	3.558933E+07	1.804	9.89
9F20044-CALJ	10000	7.354986E+07	1.803	9.89

AVE RF **1.980** RF RSD **15.77** AVE RT **9.89**

4-Bromofluorobenzene (Sur)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9F20044-CALC	50	115213	0.566	10.98
9F20044-CALD	50	112452	0.572	10.98
9F20044-CALE	50	110399	0.568	10.98
9F20044-CALF	50	112659	0.582	10.98
9F20044-CALG	50	110284	0.586	10.98
9F20044-CALH	50	116804	0.593	10.98
9F20044-CALI	50	119127	0.604	10.98
9F20044-CALJ	50	123534	0.606	10.98

AVE RF **0.585** RF RSD **2.64** AVE RT **10.98**

Injection Log

Directory: v:\data\2019-06\9F20044

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	Vi19062017.d	1.	9F20044-IBL1	1X 5mL DI	20 Jun 2019 16:55
2	2	Vi19062018.d	1.	9F20044-TUN1	A19C125 5mL BFB...	20 Jun 2019 17:22
3	3	Vi19062019.d	1.	9F20044-ICB1	1X 5mL DI	20 Jun 2019 17:49
4	4	Vi19062020.d	1.	9F20044-CAL1	1X 5mL 0.1/0.2P...	20 Jun 2019 18:16
5	5	Vi19062021.d	1.	9F20044-CAL2	1X 5mL 0.2/0.4P...	20 Jun 2019 18:43
6	6	Vi19062022.d	1.	9F20044-CAL3	1X 5mL 0.4/0.8P...	20 Jun 2019 19:10
7	7	Vi19062023.d	1.	9F20044-CAL4	1X 5mL 1/2PPB V...	20 Jun 2019 19:37
8	8	Vi19062024.d	1.	9F20044-CAL5	1X 5mL 2/4PPB V...	20 Jun 2019 20:04
9	9	Vi19062025.d	1.	9F20044-CAL6	1X 5mL 5/10PPB ...	20 Jun 2019 20:31
10	10	Vi19062026.d	1.	9F20044-CAL7	1X 5mL 10/20PPB...	20 Jun 2019 20:58
11	11	Vi19062027.d	1.	9F20044-CAL8	1X 5mL 20/40PPB...	20 Jun 2019 21:25
12	12	Vi19062028.d	1.	9F20044-CAL9	1X 5mL 50/100PP...	20 Jun 2019 21:52
13	13	Vi19062029.d	1.	9F20044-IBL2	1X 5mL DI	20 Jun 2019 22:19
14	14	Vi19062030.d	1.	9F20044-CALA	1X 5mL 100/200P...	20 Jun 2019 22:46
15	15	Vi19062031.d	1.	9F20044-IBL3	1X 5mL DI	20 Jun 2019 23:13
16	16	Vi19062032.d	1.	9F20044-CALB	1X 5mL 200/400P...	20 Jun 2019 23:40
17	17	Vi19062033.d	1.	9F20044-IBL4	1X 5mL DI	21 Jun 2019 00:07
18	18	Vi19062034.d	1.	9F20044-IBL5	1X 5mL DI	21 Jun 2019 00:34
19	19	Vi19062035.d	1.	9F20044-ICV1	1X 5mL 20/40PPB...	21 Jun 2019 01:01
20	20	Vi19062036.d	1.	9F20044-ICV2	1X 5mL 5/1250PP...	21 Jun 2019 01:28
21	21	Vi19062037.d	1.	9F20044-IBL6	1X 5mL DI	21 Jun 2019 01:55
22	22	Vi19062038.d	1.	9F20044-TUN2	A19C125 5mL BFB...	21 Jun 2019 02:22
23	23	Vi19062039.d	1.	9F20044-RT1	A1A167 VPH RT STD	21 Jun 2019 02:49
24	24	Vi19062040.d	1.	9F20044-IBL7	1X 5mL DI	21 Jun 2019 03:16
25	25	Vi19062041.d	1.	9F20044-ICB1	1X 5mL DI	21 Jun 2019 03:43
26	26	Vi19062042.d	1.	9F20044-CALC	1X 5mL 50PPB GX	21 Jun 2019 04:10
27	27	Vi19062043.d	1.	9F20044-CALD	1X 5mL 100PPB GX	21 Jun 2019 04:37
28	28	Vi19062044.d	1.	9F20044-CALE	1X 5mL 250PPB GX	21 Jun 2019 05:04
29	29	Vi19062045.d	1.	9F20044-CALF	1X 5mL 500PPB GX	21 Jun 2019 05:31
30	30	Vi19062046.d	1.	9F20044-CALG	1X 5mL 1000PPB GX	21 Jun 2019 05:58
31	31	Vi19062047.d	1.	9F20044-CALH	1X 5mL 2500PPB GX	21 Jun 2019 06:25
32	32	Vi19062048.d	1.	9F20044-CALI	1X 5mL 5000PPB GX	21 Jun 2019 06:52
33	33	Vi19062049.d	1.	9F20044-CALJ	1X 5mL 10000PPB GX	21 Jun 2019 07:19
34	34	Vi19062050.d	1.	9F20044-IBL8	1X 5mL DI	21 Jun 2019 07:46
35	35	Vi19062051.d	1.	9F20044-IBL9	1X 5mL DI	21 Jun 2019 08:13
36	36	Vi19062052.d	1.	9F20044-ICV3	1X 5mL 500PPB GX	21 Jun 2019 08:40
37	37	Vi19062053.d	1.	9F20044-IBLA	1X 5mL DI	21 Jun 2019 09:08

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062017.D
Acq On : 20 Jun 2019 4:55 pm
Operator : MM
Sample : 9F20044-IBL1
Misc : 1X 5mL DI
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

MR

Quant Time: Jun 21 10:39:45 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration

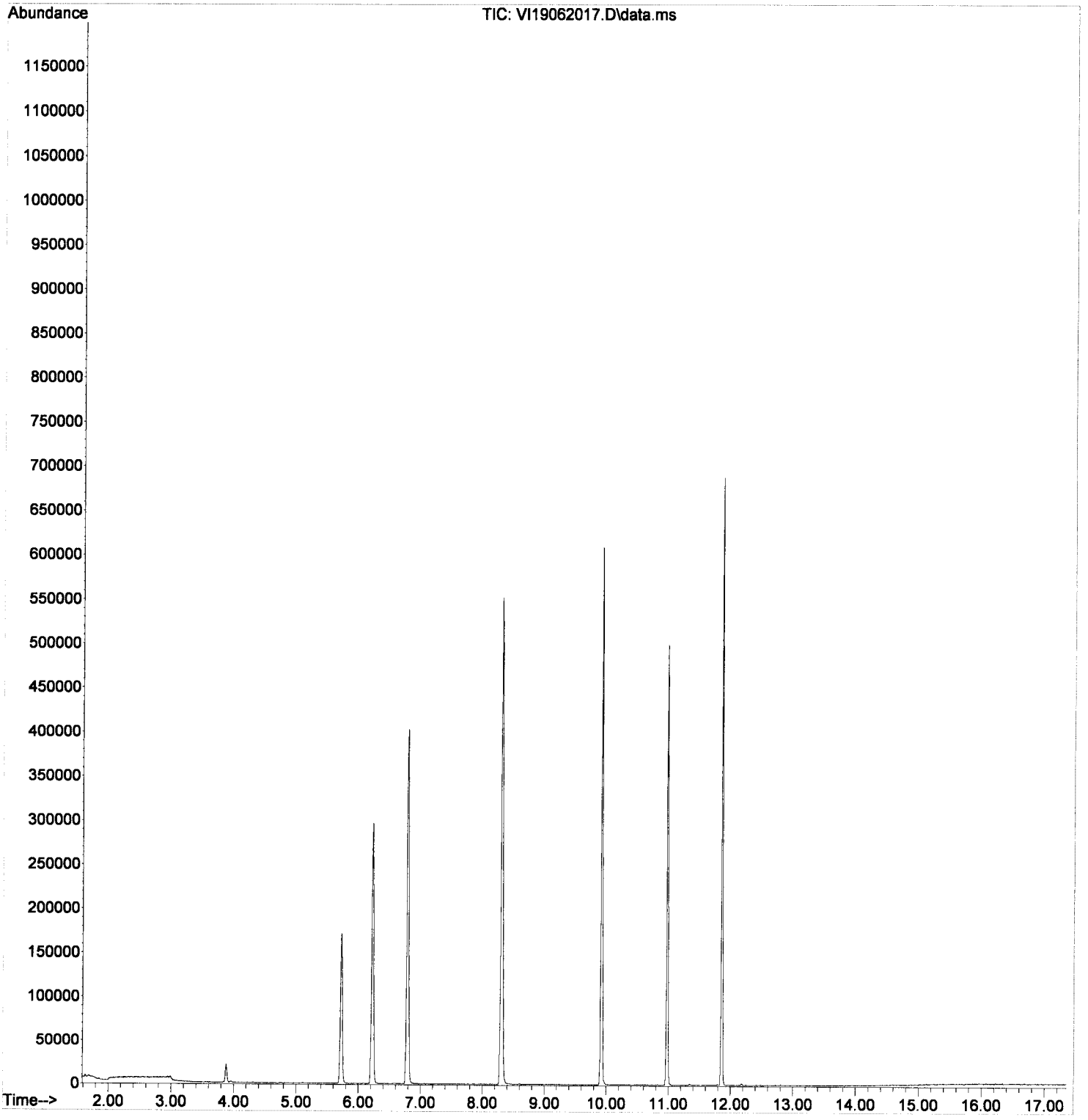
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.223	168	227353	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	9.916	117	333976	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	11.856	152	152208	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	5.718	111	120663	49.23	ug/L		0.00
39) 1,4-Difluorobenzene (S)	6.789	114	376223	49.72	ug/L		0.00
48) Toluene-d8 (S)	8.304	98	439226	50.33	ug/L		0.00
67) 4-Bromofluorobenzene (S)	10.980	174	126337	50.10	ug/L		0.00
Target Compounds							Qvalue
3) Chloromethane	1.904	50	487	0.16	ug/L	#	47
5) Bromomethane	2.372	96	269	0.19	ug/L		83
6) Chloroethane	2.585	64	129	0.13	ug/L	#	36
14) Methylene Chloride	3.881	84	9353	2.37	ug/L		94
15) Acetone	3.960	43	2747	2.48	ug/L		94
19) tert-Butanol (TBA)	4.301	59	370	0.78	ug/L		46

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062017.D
Acq On : 20 Jun 2019 4:55 pm
Operator : MM
Sample : 9F20044-IBL1
Misc : 1X 5mL DI
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 10:39:45 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration

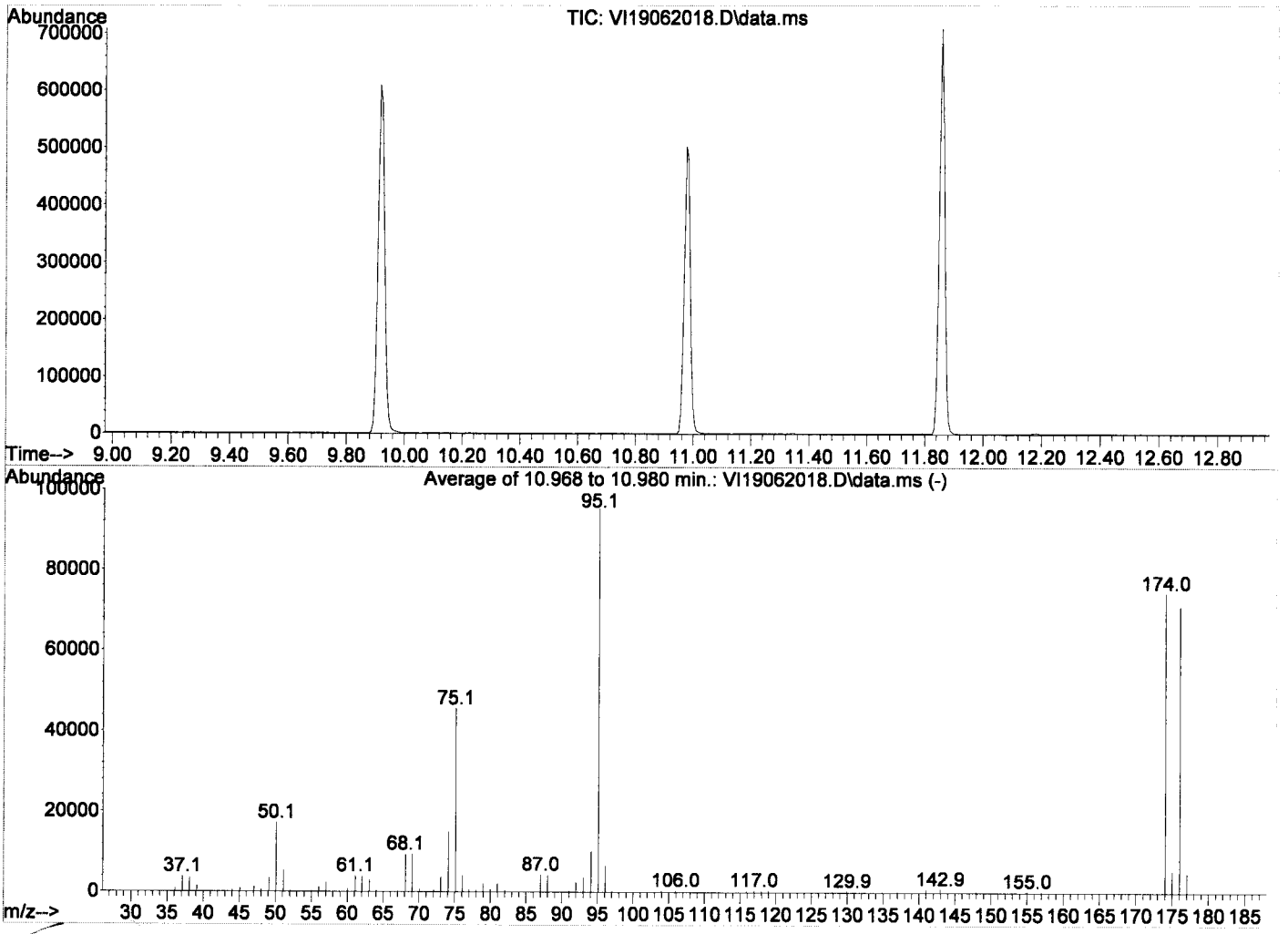


BFB

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062018.D
Acq On : 20 Jun 2019 5:22 pm
Operator : MM
Sample : 9F20044-TUN1
Misc : A19C125 5mL BFB (IS/SURR)
ALS Vial : 2 Sample Multiplier: 1

Integration File: RTEINT.P

Method : C:\msdchem\1\methods\VI190621W+.M
Title : EPA 8260: Volatile Organic Compounds
Last Update : Fri Jun 21 10:05:40 2019



AutoFind: Scans 1543, 1544, 1545; Background Corrected with Scan 1537

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	12	40	18.1	17224	PASS
75	95	30	60	47.9	45648	PASS
95	95	100	100	100.0	95269	PASS
96	95	5	9	6.9	6574	PASS
173	174	0.00	2	0.1	83	PASS
174	95	50	200	78.1	74403	PASS
175	174	5	9	7.3	5400	PASS
176	174	95	101	95.7	71181	PASS
177	176	5	9	6.8	4820	PASS

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062018.D
Acq On : 20 Jun 2019 5:22 pm
Operator : MM
Sample : 9F20044-TUN1
Misc : A19C125 5mL BFB (IS/SURR)
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

M 6/21/19

Quant Time: Jun 21 10:39:51 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration

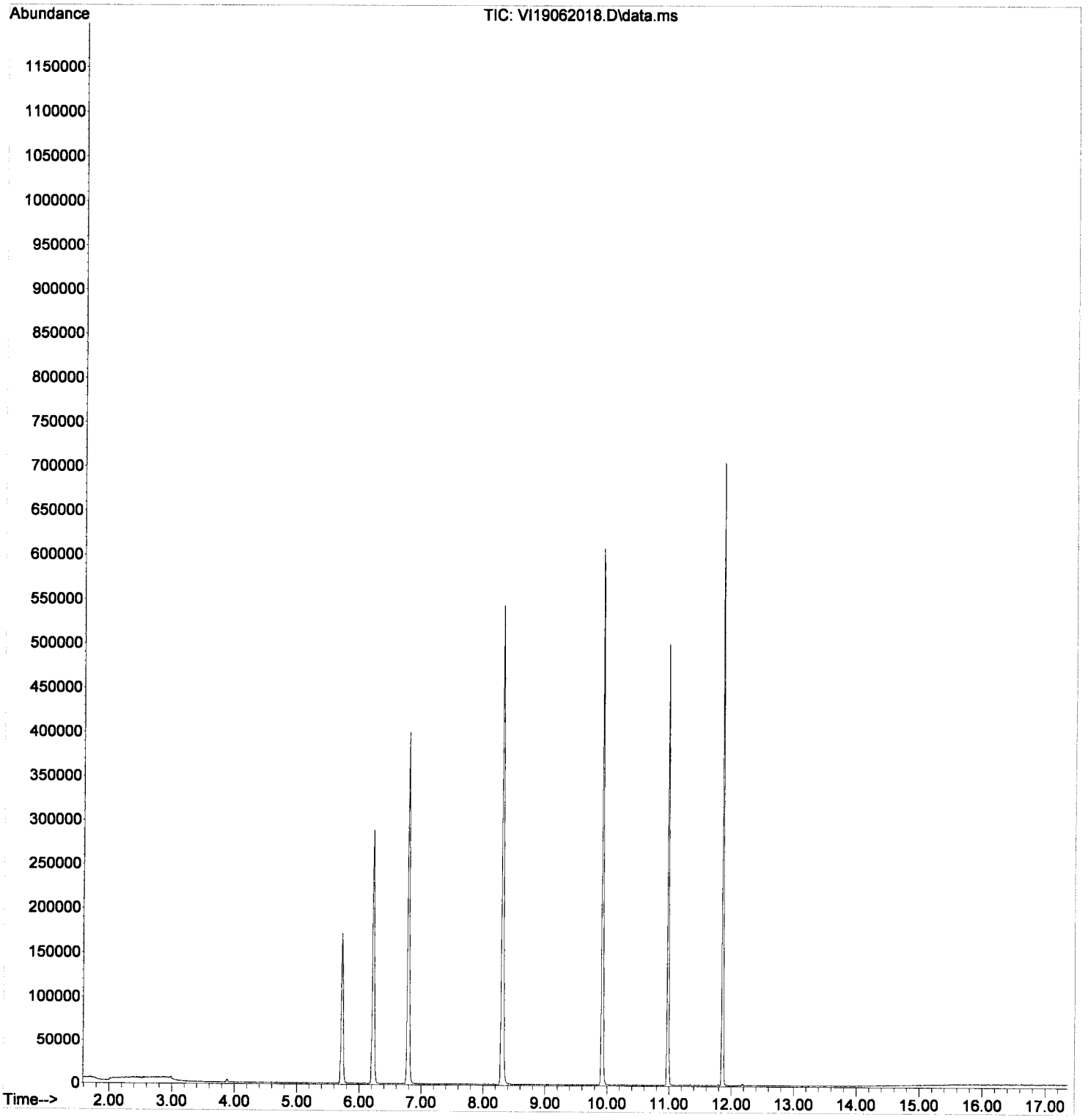
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.223	168	223382	50.00	ug/L	0.00
45) Chlorobenzene-d5 (I)	9.916	117	332022	50.00	ug/L	0.00
66) 1,4-Dichlorobenzene-d4...	11.856	152	150946	50.00	ug/L	0.00
System Monitoring Compounds						
32) Dibromofluoromethane (S)	5.724	111	118076	49.03	ug/L	0.00
39) 1,4-Difluorobenzene (S)	6.789	114	364407	49.01	ug/L	0.00
48) Toluene-d8 (S)	8.303	98	434245	50.06	ug/L	0.00
67) 4-Bromofluorobenzene (S)	10.980	174	126784	50.70	ug/L	0.00
Target Compounds						Qvalue
3) Chloromethane	1.904	50	333	0.11	ug/L #	47
5) Bromomethane	2.372	96	268	0.20	ug/L #	47
14) Methylene Chloride	3.881	84	1446	Below Cal		90
15) Acetone	3.948	43	832	0.76	ug/L #	44

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062018.D
Acq On : 20 Jun 2019 5:22 pm
Operator : MM
Sample : 9F20044-TUN1
Misc : A19C125 5mL BFB (IS/SURR)
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 10:39:51 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062019.D
Acq On : 20 Jun 2019 5:49 pm
Operator : MM
Sample : 9F20044-ICB1
Misc : 1X 5mL DI
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 10:40:16 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration

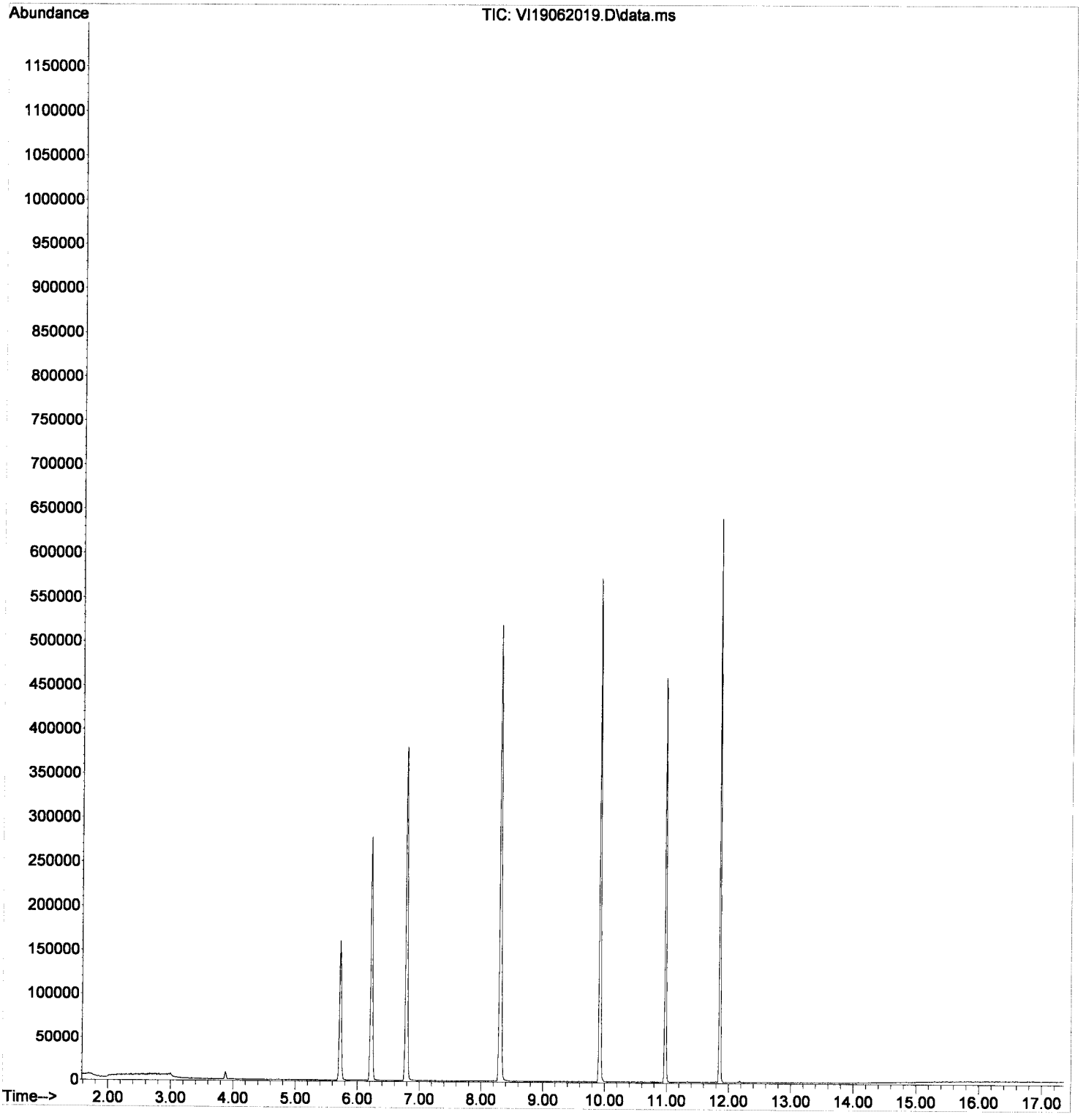
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Pentafluorobenzene (I)	6.223	168	213213	50.00 ug/L	0.00
45) Chlorobenzene-d5 (I)	9.916	117	313537	50.00 ug/L	0.00
66) 1,4-Dichlorobenzene-d4...	11.856	152	138389	50.00 ug/L	0.00
System Monitoring Compounds					
32) Dibromofluoromethane (S)	5.724	111	113446	49.36 ug/L	0.00
39) 1,4-Difluorobenzene (S)	6.789	114	353458	49.81 ug/L	0.00
48) Toluene-d8 (S)	8.304	98	411974	50.29 ug/L	0.00
67) 4-Bromofluorobenzene (S)	10.980	174	118495	51.68 ug/L	0.00
Target Compounds					Qvalue
3) Chloromethane	1.904	50	326	0.12 ug/L #	47
5) Bromomethane	2.372	96	346	0.26 ug/L	89
14) Methylene Chloride	3.881	84	3908	Below Cal	87
15) Acetone	3.960	43	1239	1.19 ug/L #	44

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062019.D
Acq On : 20 Jun 2019 5:49 pm
Operator : MM
Sample : 9F20044-ICB1
Misc : 1X 5mL DI
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 10:40:16 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062020.D
Acq On : 20 Jun 2019 6:16 pm
Operator : MM
Sample : 9F20044-CAL1
Misc : 1X 5mL 0.1/0.2PPB VOCR+OXY
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 09:50:21 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 08:57:41 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.223	168	216252	50.00	ug/L	0.00
45) Chlorobenzene-d5 (I)	9.916	117	319588	50.00	ug/L	0.00
66) 1,4-Dichlorobenzene-d4...	11.856	152	144355	50.00	ug/L	0.00
System Monitoring Compounds						
32) Dibromofluoromethane (S)	5.724	111	116055	45.58	ug/L	0.00
39) 1,4-Difluorobenzene (S)	6.789	114	358207	46.21	ug/L	0.00
48) Toluene-d8 (S)	8.303	98	419867	49.50	ug/L	0.00
67) 4-Bromofluorobenzene (S)	10.980	174	122172	55.41	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.000		0	N.D.	d	
3) Chloromethane	1.910	50	580	0.16	ug/L	88
4) Vinyl Chloride	0.000		0	N.D.	d	
5) Bromomethane	0.000		0	N.D.	d	
6) Chloroethane	0.000		0	N.D.		
7) Trichlorofluoromethane	0.000		0	N.D.		
8) Ethanol	0.000		0	N.D.	d	
9) 1,1-Dichloroethene	0.000		0	N.D.	d	
10) Carbon Disulfide	0.000		0	N.D.	d	
11) Freon 113	0.000		0	N.D.		
12) Iodomethane	0.000		0	N.D.		
13) Acrolein	0.000		0	N.D.		
14) Methylene Chloride	3.881	84	5025	1.84	ug/L	97
15) Acetone	0.000		0	N.D.	d	
16) t-1,2-Dichloroethene	0.000		0	N.D.		
17) n-Hexane	0.000		0	N.D.		
18) Methyl-tert-butyl-ether	0.000		0	N.D.	d	
19) tert-Butanol (TBA)	0.000		0	N.D.	d	
20) Diisopropyl ether (DIPE)	0.000		0	N.D.		
21) 1,1-Dichloroethane	0.000		0	N.D.	d	
22) Acrylonitrile	0.000		0	N.D.		
23) Ethyl-tert-butyl ether...	0.000		0	N.D.		
24) Vinyl Acetate	0.000		0	N.D.	d	
25) c-1,2-Dichloroethene	0.000		0	N.D.		
26) 2,2-Dichloropropane	0.000		0	N.D.		
27) Bromochloromethane	0.000		0	N.D.		
28) Chloroform	0.000		0	N.D.	d	
29) Carbon Tetrachloride	0.000		0	N.D.		
30) Tetrahydrofuran	0.000		0	N.D.		
31) 1,1,1-Trichloroethane	0.000		0	N.D.		
33) 1,1-Dichloropropene	0.000		0	N.D.		
34) 2-Butanone (MEK)	0.000		0	N.D.	d	
35) Benzene	0.000		0	N.D.	d	
36) tert-Amyl methyl ether...	0.000		0	N.D.		
37) 1,2-Dichloroethane (EDC)	0.000		0	N.D.		
38) iso-Butyl Alcohol	0.000		0	N.D.	d	
40) Trichloroethene (TCE)	0.000		0	N.D.		
41) Tert-Amyl-Ethyl-Ether ...	0.000		0	N.D.		
42) Dibromomethane	0.000		0	N.D.		
43) 1,2-Dichloropropane	0.000		0	N.D.		
44) Bromodichloromethane	0.000		0	N.D.		
46) 2-Chloroethyl Vinyl Ether	0.000		0	N.D.		
47) c-1,3-Dichloropropene	0.000		0	N.D.	d	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062020.D
Acq On : 20 Jun 2019 6:16 pm
Operator : MM
Sample : 9F20044-CAL1
Misc : 1X 5mL 0.1/0.2PPB VOCR+OXY
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 09:50:21 2019
Quant Method : C:\msdchem\1\methods\~~VI190621W+.M~~
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 08:57:41 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Toluene	8.364	91	1033	0.11	ug/L		94
50) Tetrachloroethene (PCE)	0.000		0	N.D.			
51) 4-Methyl-2-Pentanone (...	0.000		0	N.D.		d	
52) t-1,3-Dichloropropene	0.000		0	N.D.			
53) 1,1,2-Trichloroethane	0.000		0	N.D.			
54) Dibromochloromethane	0.000		0	N.D.			
55) 1,3-Dichloropropane	0.000		0	N.D.		d	
56) 1,2-Dibromoethane (EDB)	0.000		0	N.D.			
57) 2-Hexanone	0.000		0	N.D.		d	
58) Chlorobenzene	0.000		0	N.D.		d	
59) Ethylbenzene	9.958	91	867	0.09	ug/L		92
60) 1,1,1,2-Tetrachloroethane	0.000		0	N.D.			
61) m,p-Xylenes (2)	10.092	91	1349	0.41	ug/L		90
62) o-Xylene	10.475	91	703	0.25	ug/L		92
63) Styrene	0.000		0	N.D.		d	
64) Bromoform	0.000		0	N.D.			
65) Isopropylbenzene	0.000		0	N.D.		d	
68) Bromobenzene	0.000		0	N.D.			
69) n-Propylbenzene	0.000		0	N.D.		d	
70) 1,1,2,2-Tetrachloroethane	0.000		0	N.D.			
71) 2-Chlorotoluene	0.000		0	N.D.			
72) 1,3,5-Trimethylbenzene	0.000		0	N.D.		d	
73) 1,2,3-Trichloropropane	0.000		0	N.D.			
74) t-1,4-Dichloro-2-butene	0.000		0	N.D.			
75) 4-Chlorotoluene	0.000		0	N.D.		d	
76) tert-Butylbenzene	0.000		0	N.D.		d	
77) 1,2,4-Trimethylbenzene	0.000		0	N.D.		d	
78) sec-Butylbenzene	0.000		0	N.D.		d	
79) 4-Isopropyltoluene	0.000		0	N.D.		d	
80) 1,3-Dichlorobenzene	0.000		0	N.D.		d	
81) 1,4-Dichlorobenzene	0.000		0	N.D.		d	
82) n-Butylbenzene	0.000		0	N.D.		d	
83) 1,2-Dichlorobenzene	0.000		0	N.D.		d	
84) 1,2-Dibromo-3-Chloropr...	0.000		0	N.D.			
85) Hexachlorobutadiene	0.000		0	N.D.			
86) 1,2,4-Trichlorobenzene	0.000		0	N.D.			
87) Naphthalene	0.000		0	N.D.		d	
88) 1,2,3-Trichlorobenzene	0.000		0	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062020.D
Acq On : 20 Jun 2019 6:16 pm
Operator : MM
Sample : 9F20044-CAL1
Misc : 1X 5mL 0.1/0.2PPB VOCR+OXY
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 09:45:42 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 08:57:41 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.223	168	216252	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	9.916	117	319588	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	11.856	152	144355	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	5.724	111	116055	45.58	ug/L		0.00
39) 1,4-Difluorobenzene (S)	6.789	114	358207	46.21	ug/L		0.00
48) Toluene-d8 (S)	8.303	98	419867	49.50	ug/L		0.00
67) 4-Bromofluorobenzene (S)	10.980	174	122172	55.41	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.685	85	147	0.06	ug/L	#	49
3) Chloromethane	1.910	50	580	0.16	ug/L		88
4) Vinyl Chloride	2.007	62	208	0.07	ug/L	#	50
5) Bromomethane	2.372	96	318	0.19	ug/L	#	47
6) Chloroethane	0.000		0	N.D.			
7) Trichlorofluoromethane	0.000		0	N.D.			
8) Ethanol	3.242	45	289	No Calib		#	
9) 1,1-Dichloroethene	3.242	61	114	0.04	ug/L	#	28
10) Carbon Disulfide	3.260	76	568	0.11	ug/L		78
11) Freon 113	0.000		0	N.D.			
12) Iodomethane	0.000		0	N.D.			
13) Acrolein	0.000		0	N.D.			
14) Methylene Chloride	3.881	84	5025	1.84	ug/L		97
15) Acetone	3.960	43	930	0.72	ug/L	#	44
16) t-1,2-Dichloroethene	0.000		0	N.D.			
17) n-Hexane	0.000		0	N.D.			
18) Methyl-tert-butyl-ether	4.185	73	515	0.10	ug/L		63
19) tert-Butanol (TBA)	4.307	59	2749	No Calib			
20) Diisopropyl ether (DIPE)	0.000		0	N.D.			
21) 1,1-Dichloroethane	4.702	63	203	0.05	ug/L	#	48
22) Acrylonitrile	0.000		0	N.D.			
23) Ethyl-tert-butyl ether...	0.000		0	N.D.			
24) Vinyl Acetate	4.988	43	684	2.83	ug/L		74
25) c-1,2-Dichloroethene	0.000		0	N.D.			
26) 2,2-Dichloropropane	0.000		0	N.D.			
27) Bromochloromethane	0.000		0	N.D.			
28) Chloroform	5.542	83	285	0.07	ug/L	#	28
29) Carbon Tetrachloride	0.000		0	N.D.			
30) Tetrahydrofuran	0.000		0	N.D.			
31) 1,1,1-Trichloroethane	0.000		0	N.D.			
33) 1,1-Dichloropropene	0.000		0	N.D.			
34) 2-Butanone (MEK)	5.882	43	561	0.31	ug/L		52
35) Benzene	6.126	78	912	0.10	ug/L		55
36) tert-Amyl methyl ether...	0.000		0	N.D.			
37) 1,2-Dichloroethane (EDC)	0.000		0	N.D.			
38) iso-Butyl Alcohol	6.405	43	402	1.92	ug/L		77
40) Trichloroethene (TCE)	0.000		0	N.D.			
41) Tert-Amyl-Ethyl-Ether ...	0.000		0	N.D.			
42) Dibromomethane	0.000		0	N.D.			
43) 1,2-Dichloropropane	0.000		0	N.D.			
44) Bromodichloromethane	0.000		0	N.D.			
46) 2-Chloroethyl Vinyl Ether	0.000		0	N.D.			
47) c-1,3-Dichloropropene	8.097	75	126	0.23	ug/L	#	53

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062020.D
Acq On : 20 Jun 2019 6:16 pm
Operator : MM
Sample : 9F20044-CAL1
Misc : 1X 5mL 0.1/0.2PPB VOCR+OXY
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 09:45:42 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 08:57:41 2019
Response via : Initial Calibration

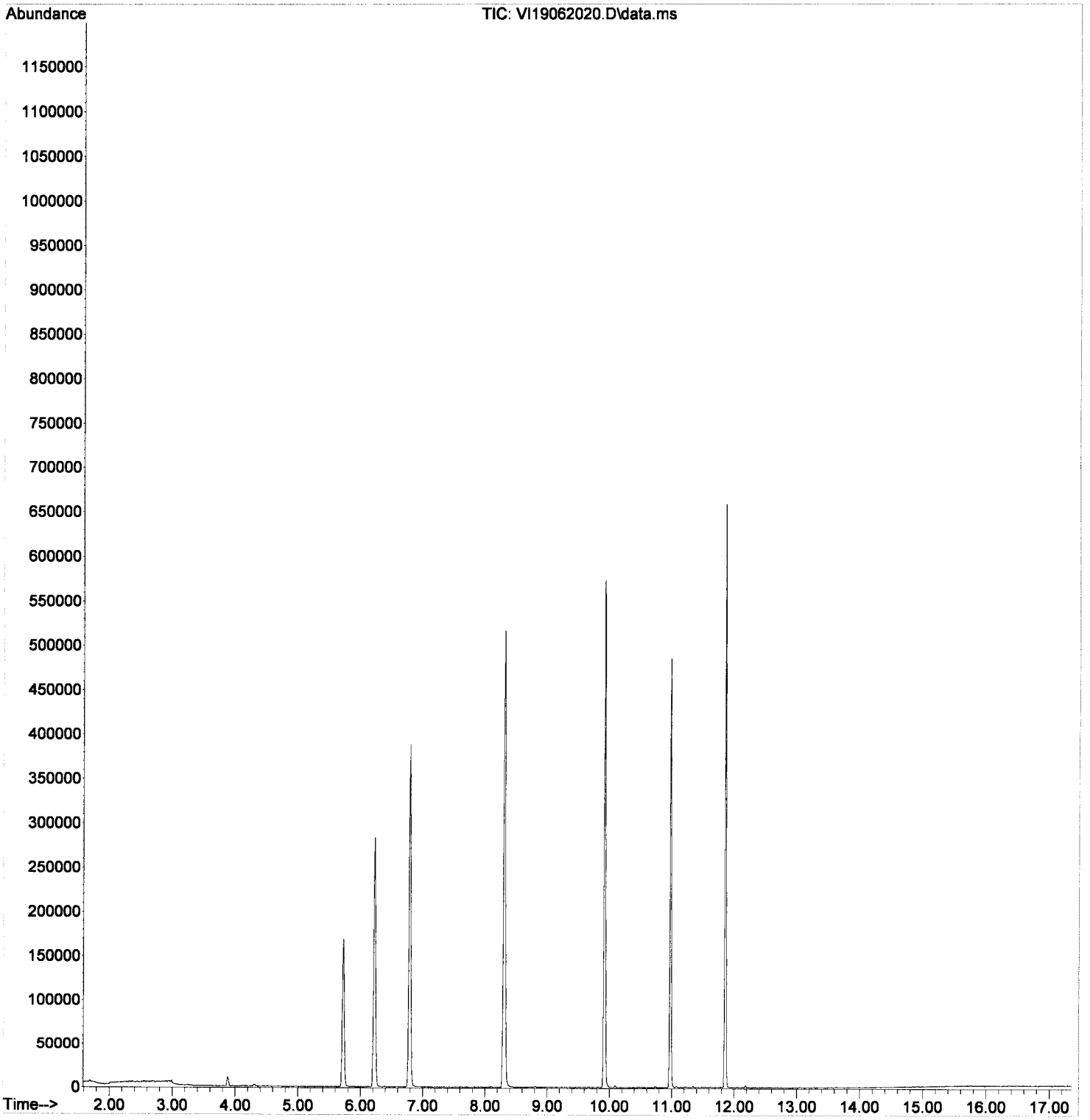
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Toluene	8.364	91	1033	0.11	ug/L		94
50) Tetrachloroethene (PCE)	0.000		0	N.D.			
51) 4-Methyl-2-Pentanone (...	8.808	43	934	0.30	ug/L		84
52) t-1,3-Dichloropropene	0.000		0	N.D.			
53) 1,1,2-Trichloroethane	0.000		0	N.D.			
54) Dibromochloromethane	0.000		0	N.D.			
55) 1,3-Dichloropropane	9.301	76	204	0.06	ug/L	#	58
56) 1,2-Dibromoethane (EDB)	0.000		0	N.D.			
57) 2-Hexanone	9.666	43	545	1.96	ug/L		86
58) Chlorobenzene	9.928	112	523	0.09	ug/L	#	1
59) Ethylbenzene	9.958	91	867	0.09	ug/L		92
60) 1,1,1,2-Tetrachloroethane	0.000		0	N.D.			
61) m,p-Xylenes (2)	10.092	91	1349	0.41	ug/L		90
62) o-Xylene	10.475	91	703	0.25	ug/L		92
63) Styrene	10.518	104	391	0.35	ug/L	#	42
64) Bromoform	0.000		0	N.D.			
65) Isopropylbenzene	10.737	105	802	0.53	ug/L		85
68) Bromobenzene	0.000		0	N.D			
69) n-Propylbenzene	11.078	91	975	0.11	ug/L		84
70) 1,1,2,2-Tetrachloroethane	0.000		0	N.D.			
71) 2-Chlorotoluene	0.000		0	N.D.			
72) 1,3,5-Trimethylbenzene	11.236	105	604	0.47	ug/L		94
73) 1,2,3-Trichloropropane	0.000		0	N.D.			
74) t-1,4-Dichloro-2-butene	0.000		0	N.D.			
75) 4-Chlorotoluene	11.339	91	551	0.10	ug/L	#	45
76) tert-Butylbenzene	11.485	91	267	0.44	ug/L	#	79
77) 1,2,4-Trimethylbenzene	11.540	105	654	0.37	ug/L		88
78) sec-Butylbenzene	11.625	105	749	0.33	ug/L		75
79) 4-Isopropyltoluene	11.729	119	490	0.36	ug/L		51
80) 1,3-Dichlorobenzene	11.802	146	301	0.08	ug/L	#	72
81) 1,4-Dichlorobenzene	11.868	146	392	0.09	ug/L	#	2
82) n-Butylbenzene	12.051	91	522	0.34	ug/L		68
83) 1,2-Dichlorobenzene	12.191	146	286	0.08	ug/L	#	70
84) 1,2-Dibromo-3-Chloropr...	0.000		0	N.D.			
85) Hexachlorobutadiene	0.000		0	N.D.			
86) 1,2,4-Trichlorobenzene	0.000		0	N.D.			
87) Naphthalene	13.633	128	790	0.75	ug/L		81
88) 1,2,3-Trichlorobenzene	0.000		0	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062020.D
Acq On : 20 Jun 2019 6:16 pm
Operator : MM
Sample : 9F20044-CAL1
Misc : 1X 5mL 0.1/0.2PPB VOCR+OXY
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 09:45:42 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 08:57:41 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062021.D
Acq On : 20 Jun 2019 6:43 pm
Operator : MM
Sample : 9F20044-CAL2
Misc : 1X 5mL 0.2/0.4PPB VOCR+OXY
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 09:52:55 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 08:57:41 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Pentafluorobenzene (I)	6.223	168	214495	50.00 ug/L	0.00
45) Chlorobenzene-d5 (I)	9.916	117	315477	50.00 ug/L	0.00
66) 1,4-Dichlorobenzene-d4...	11.856	152	143049	50.00 ug/L	0.00
System Monitoring Compounds					
32) Dibromofluoromethane (S)	5.718	111	113958	45.12 ug/L	0.00
39) 1,4-Difluorobenzene (S)	6.783	114	352562	45.85 ug/L	0.00
48) Toluene-d8 (S)	8.304	98	416463	49.74 ug/L	0.00
67) 4-Bromofluorobenzene (S)	10.980	174	119949	54.89 ug/L	0.00
Target Compounds					Qvalue
2) Dichlorodifluoromethane	0.000		0	N.D. d	
3) Chloromethane	1.892	50	842	0.23 ug/L	90
4) Vinyl Chloride	1.995	62	502	0.16 ug/L #	50
5) Bromomethane	0.000		0	N.D. d	
6) Chloroethane	0.000		0	N.D. d	
7) Trichlorofluoromethane	0.000		0	N.D. d	
8) Ethanol	0.000		0	N.D. d	
9) 1,1-Dichloroethene	3.242	61	456	0.15 ug/L	89
10) Carbon Disulfide	0.000		0	N.D. d	
11) Freon 113	0.000		0	N.D. d	
12) Iodomethane	0.000		0	N.D.	
13) Acrolein	0.000		0	N.D. d	
14) Methylene Chloride	3.875	84	3802	1.40 ug/L	95
15) Acetone	0.000		0	N.D. d	
16) t-1,2-Dichloroethene	0.000		0	N.D. d	
17) n-Hexane	0.000		0	N.D.	
18) Methyl-tert-butyl-ether	0.000		0	N.D. d	
19) tert-Butanol (TBA)	4.301	59	5907	No Calib	
20) Diisopropyl ether (DIPE)	0.000		0	N.D. d	
21) 1,1-Dichloroethane	0.000		0	N.D. d	
22) Acrylonitrile	0.000		0	N.D.	
23) Ethyl-tert-butyl ether...	0.000		0	N.D. d	
24) Vinyl Acetate	0.000		0	N.D. d	
25) c-1,2-Dichloroethene	0.000		0	N.D. d	
26) 2,2-Dichloropropane	0.000		0	N.D. d	
27) Bromochloromethane	0.000		0	N.D.	
28) Chloroform	0.000		0	N.D. d	
29) Carbon Tetrachloride	0.000		0	N.D. d	
30) Tetrahydrofuran	0.000		0	N.D. d	
31) 1,1,1-Trichloroethane	0.000		0	N.D. d	
33) 1,1-Dichloropropene	0.000		0	N.D. d	
34) 2-Butanone (MEK)	0.000		0	N.D. d	
35) Benzene	6.126	78	1868	0.21 ug/L	95
36) tert-Amyl methyl ether...	0.000		0	N.D. d	
37) 1,2-Dichloroethane (EDC)	0.000		0	N.D. d	
38) iso-Butyl Alcohol	0.000		0	N.D. d	
40) Trichloroethene (TCE)	0.000		0	N.D. d	
41) Tert-Amyl-Ethyl-Ether ...	0.000		0	N.D.	
42) Dibromomethane	0.000		0	N.D.	
43) 1,2-Dichloropropane	0.000		0	N.D. d	
44) Bromodichloromethane	0.000		0	N.D. d	
46) 2-Chloroethyl Vinyl Ether	0.000		0	N.D. d	
47) c-1,3-Dichloropropene	0.000		0	N.D. d	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062021.D
Acq On : 20 Jun 2019 6:43 pm
Operator : MM
Sample : 9F20044-CAL2
Misc : 1X 5mL 0.2/0.4PPB VOCR+OXY
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 09:52:55 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 08:57:41 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Toluene	8.364	91	1910	0.21	ug/L		94
50) Tetrachloroethene (PCE)	0.000		0	N.D.	d		
51) 4-Methyl-2-Pentanone (...	0.000		0	N.D.	d		
52) t-1,3-Dichloropropene	0.000		0	N.D.	d		
53) 1,1,2-Trichloroethane	0.000		0	N.D.	d		
54) Dibromochloromethane	0.000		0	N.D.	d		
55) 1,3-Dichloropropane	0.000		0	N.D.	d		
56) 1,2-Dibromoethane (EDB)	9.435	107	297	0.15	ug/L		95
57) 2-Hexanone	0.000		0	N.D.	d		
58) Chlorobenzene	9.934	112	1008	0.17	ug/L	#	49
59) Ethylbenzene	9.958	91	1959	0.22	ug/L		90
60) 1,1,1,2-Tetrachloroethane	9.995	131	225	0.13	ug/L	#	82
61) m,p-Xylenes (2)	10.092	91	2948	0.63	ug/L		96
62) o-Xylene	10.475	91	1371	0.35	ug/L		85
63) Styrene	10.524	104	998	0.46	ug/L		95
64) Bromoform	0.000		0	N.D.			
65) Isopropylbenzene	10.737	105	1594	0.62	ug/L		91
68) Bromobenzene	11.059	156	406	0.19	ug/L	#	82
69) n-Propylbenzene	11.078	91	1849	0.20	ug/L		98
70) 1,1,2,2-Tetrachloroethane	11.145	85	327	0.18	ug/L		92
71) 2-Chlorotoluene	0.000		0	N.D.	d		
72) 1,3,5-Trimethylbenzene	11.236	105	1280	0.57	ug/L		94
73) 1,2,3-Trichloropropane	0.000		0	N.D.			
74) t-1,4-Dichloro-2-butene	0.000		0	N.D.			
75) 4-Chlorotoluene	11.345	91	1252	0.22	ug/L		87
76) tert-Butylbenzene	11.485	91	742	0.57	ug/L		81
77) 1,2,4-Trimethylbenzene	11.540	105	1259	0.46	ug/L		91
78) sec-Butylbenzene	11.625	105	1695	0.45	ug/L		94
79) 4-Isopropyltoluene	11.729	119	1137	0.47	ug/L		95
80) 1,3-Dichlorobenzene	11.802	146	722	0.20	ug/L		90
81) 1,4-Dichlorobenzene	11.869	146	760	0.18	ug/L	#	25
82) n-Butylbenzene	12.051	91	1025	0.43	ug/L		94
83) 1,2-Dichlorobenzene	12.191	146	689	0.20	ug/L		89
84) 1,2-Dibromo-3-Chloropr...	0.000		0	N.D.			
85) Hexachlorobutadiene	0.000		0	N.D.			
86) 1,2,4-Trichlorobenzene	0.000		0	N.D.	d		
87) Naphthalene	0.000		0	N.D.	d		
88) 1,2,3-Trichlorobenzene	0.000		0	N.D.	d		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062021.D
Acq On : 20 Jun 2019 6:43 pm
Operator : MM
Sample : 9F20044-CAL2
Misc : 1X 5mL 0.2/0.4PPB VOCR+OXY
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 09:45:47 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 08:57:41 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.223	168	214495	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	9.916	117	315477	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	11.856	152	143049	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	5.718	111	113958	45.12	ug/L		0.00
39) 1,4-Difluorobenzene (S)	6.783	114	352562	45.85	ug/L		0.00
48) Toluene-d8 (S)	8.304	98	416463	49.74	ug/L		0.00
67) 4-Bromofluorobenzene (S)	10.980	174	119949	54.89	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.679	85	423	0.17	ug/L	#	49
3) Chloromethane	1.892	50	842	0.28	ug/L		90
4) Vinyl Chloride	1.995	62	502	0.16	ug/L	#	50
5) Bromomethane	2.354	96	543	0.34	ug/L		73
6) Chloroethane	2.506	64	126	Below Cal		#	36
7) Trichlorofluoromethane	2.664	101	476	0.18	ug/L		91
8) Ethanol	3.242	45	737	No Calib		#	
9) 1,1-Dichloroethene	3.242	61	456	0.15	ug/L		89
10) Carbon Disulfide	3.254	76	1009	0.19	ug/L		78
11) Freon 113	3.291	101	185	0.09	ug/L	#	63
12) Iodomethane	0.000		0	N.D.			
13) Acrolein	3.625	56	183	0.31	ug/L	#	44
14) Methylene Chloride	3.875	84	3802	1.40	ug/L		95
15) Acetone	3.942	43	1401	1.10	ug/L	#	44
16) t-1,2-Dichloroethene	4.039	61	556	0.19	ug/L	#	73
17) n-Hexane	0.000		0	N.D.			
18) Methyl-tert-butyl-ether	4.167	73	1383	0.28	ug/L		88
19) tert-Butanol (TBA)	4.301	59	5907	No Calib			
20) Diisopropyl ether (DIPE)	4.556	45	316	No Calib			
21) 1,1-Dichloroethane	4.690	63	614	0.16	ug/L	#	48
22) Acrylonitrile	0.000		0	N.D.			
23) Ethyl-tert-butyl ether...	4.933	59	123	No Calib		#	
24) Vinyl Acetate	4.970	43	869	2.93	ug/L		74
25) c-1,2-Dichloroethene	5.237	61	484	0.17	ug/L	#	20
26) 2,2-Dichloropropane	5.347	77	463	0.27	ug/L		79
27) Bromochloromethane	0.000		0	N.D.			
28) Chloroform	5.529	83	742	0.18	ug/L		80
29) Carbon Tetrachloride	5.663	117	212	0.09	ug/L	#	14
30) Tetrahydrofuran	5.712	42	307	0.26	ug/L	#	62
31) 1,1,1-Trichloroethane	5.742	97	508	0.17	ug/L	#	69
33) 1,1-Dichloropropene	5.876	75	448	0.17	ug/L	#	43
34) 2-Butanone (MEK)	5.876	43	947	0.53	ug/L		52
35) Benzene	6.126	78	1868	0.21	ug/L		95
36) tert-Amyl methyl ether...	6.223	73	122	No Calib		#	
37) 1,2-Dichloroethane (EDC)	6.345	62	519	0.17	ug/L		54
38) iso-Butyl Alcohol	6.387	43	894	4.30	ug/L		90
40) Trichloroethene (TCE)	6.752	130	237	0.10	ug/L		76
41) Tert-Amyl-Ethyl-Ether ...	0.000		0	N.D.			
42) Dibromomethane	0.000		0	N.D.			
43) 1,2-Dichloropropane	7.318	63	403	0.17	ug/L	#	35
44) Bromodichloromethane	7.379	83	383	0.14	ug/L	#	27
46) 2-Chloroethyl Vinyl Ether	8.036	63	193	2.24	ug/L	#	100
47) c-1,3-Dichloropropene	8.097	75	477	0.39	ug/L	#	58

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062021.D
Acq On : 20 Jun 2019 6:43 pm
Operator : MM
Sample : 9F20044-CAL2
Misc : 1X 5mL 0.2/0.4PPB VOCR+OXY
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 09:45:47 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 08:57:41 2019
Response via : Initial Calibration

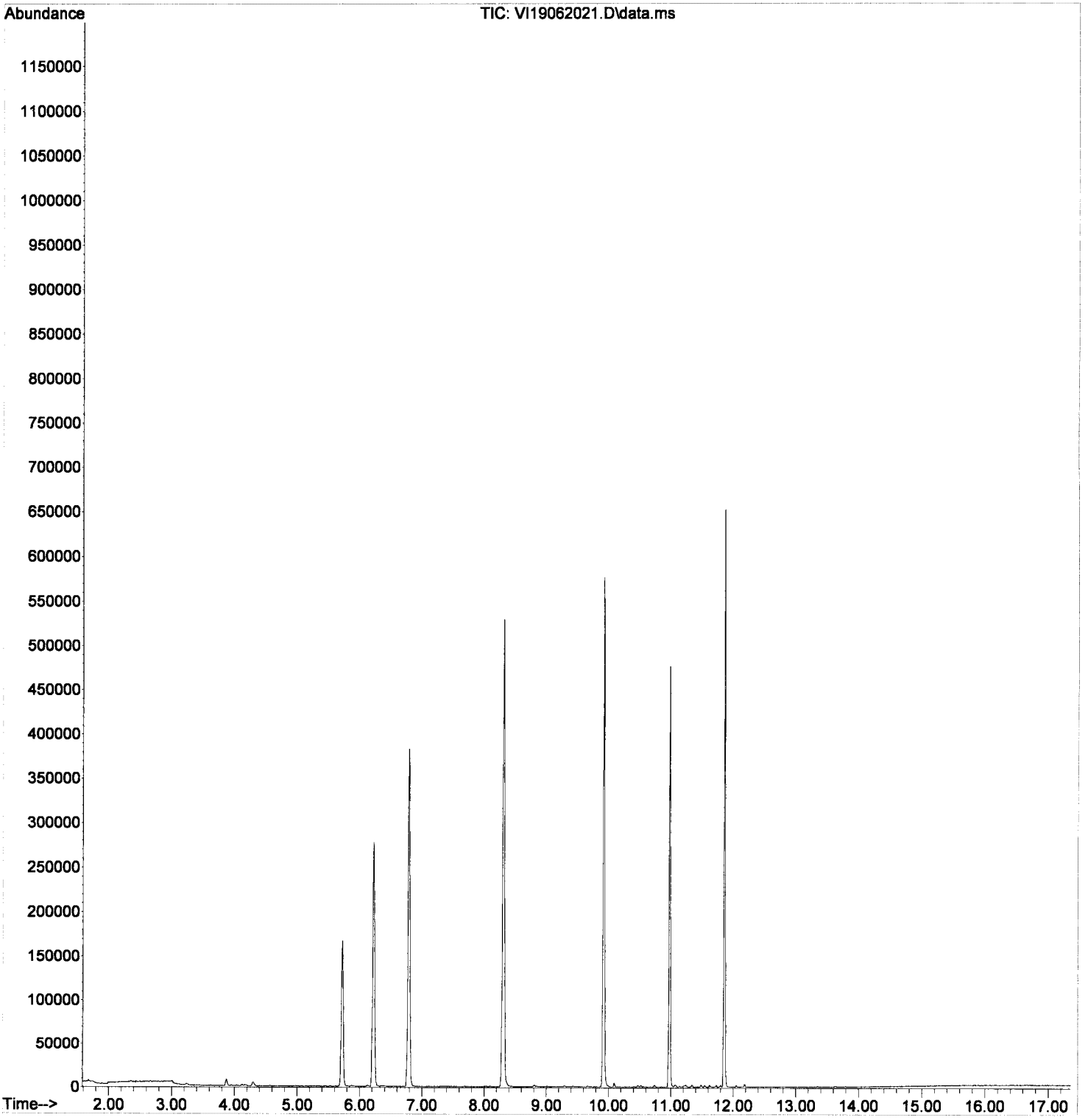
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Toluene	8.364	91	1910	0.21	ug/L		94
50) Tetrachloroethene (PCE)	8.802	166	308	0.15	ug/L	#	71
51) 4-Methyl-2-Pentanone (...	8.809	43	1390	0.45	ug/L		85
52) t-1,3-Dichloropropene	8.839	75	376	0.47	ug/L		54
53) 1,1,2-Trichloroethane	9.009	97	217	0.10	ug/L		84
54) Dibromochloromethane	9.192	129	199	0.10	ug/L	#	17
55) 1,3-Dichloropropane	9.295	76	680	0.20	ug/L	#	58
56) 1,2-Dibromoethane (EDB)	9.435	107	297	0.15	ug/L		95
57) 2-Hexanone	9.660	43	977	2.13	ug/L		83
58) Chlorobenzene	9.934	112	1008	0.17	ug/L	#	49
59) Ethylbenzene	9.958	91	1959	0.22	ug/L		90
60) 1,1,1,2-Tetrachloroethane	9.995	131	225	0.13	ug/L	#	82
61) m,p-Xylenes (2)	10.092	91	2948	0.63	ug/L		96
62) o-Xylene	10.475	91	1371	0.35	ug/L		85
63) Styrene	10.524	104	998	0.46	ug/L		95
64) Bromoform	0.000		0	N.D.			
65) Isopropylbenzene	10.737	105	1594	0.62	ug/L		91
68) Bromobenzene	11.059	156	406	0.19	ug/L	#	82
69) n-Propylbenzene	11.078	91	1849	0.20	ug/L		98
70) 1,1,2,2-Tetrachloroethane	11.145	85	327	0.18	ug/L		92
71) 2-Chlorotoluene	11.212	126	268	0.14	ug/L	#	80
72) 1,3,5-Trimethylbenzene	11.236	105	1280	0.57	ug/L		94
73) 1,2,3-Trichloropropane	0.000		0	N.D.			
74) t-1,4-Dichloro-2-butene	0.000		0	N.D.			
75) 4-Chlorotoluene	11.345	91	1252	0.22	ug/L		87
76) tert-Butylbenzene	11.485	91	742	0.57	ug/L		81
77) 1,2,4-Trimethylbenzene	11.540	105	1259	0.46	ug/L		91
78) sec-Butylbenzene	11.625	105	1695	0.45	ug/L		94
79) 4-Isopropyltoluene	11.729	119	1137	0.47	ug/L		95
80) 1,3-Dichlorobenzene	11.802	146	722	0.20	ug/L		90
81) 1,4-Dichlorobenzene	11.869	146	760	0.18	ug/L	#	25
82) n-Butylbenzene	12.051	91	1025	0.43	ug/L		94
83) 1,2-Dichlorobenzene	12.191	146	689	0.20	ug/L		89
84) 1,2-Dibromo-3-Chloropr...	0.000		0	N.D.			
85) Hexachlorobutadiene	0.000		0	N.D.			
86) 1,2,4-Trichlorobenzene	13.353	180	356	0.85	ug/L		87
87) Naphthalene	13.633	128	1415	0.86	ug/L		81
88) 1,2,3-Trichlorobenzene	13.791	180	328	0.83	ug/L		82

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062021.D
Acq On : 20 Jun 2019 6:43 pm
Operator : MM
Sample : 9F20044-CAL2
Misc : 1X 5mL 0.2/0.4PPB VOCR+OXY
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 09:45:47 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 08:57:41 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062022.D
Acq On : 20 Jun 2019 7:10 pm
Operator : MM
Sample : 9F20044-CAL3
Misc : 1X 5mL 0.4/0.8PPB VOCR+OXY
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 09:55:23 2019
Quant Method : C:\msdchem\1\methods\~~VI190621W+.~~M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 08:57:41 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.223	168	216322	50.00	ug/L	0.00
45) Chlorobenzene-d5 (I)	9.916	117	322309	50.00	ug/L	0.00
66) 1,4-Dichlorobenzene-d4...	11.856	152	147216	50.00	ug/L	0.00
System Monitoring Compounds						
32) Dibromofluoromethane (S)	5.718	111	114168	44.82	ug/L	0.00
39) 1,4-Difluorobenzene (S)	6.789	114	354384	45.70	ug/L	0.00
48) Toluene-d8 (S)	8.304	98	421971	49.33	ug/L	0.00
67) 4-Bromofluorobenzene (S)	10.980	174	123411	54.88	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.685	85	715	0.29	ug/L	79
3) Chloromethane	1.904	50	1399	0.38	ug/L	80
4) Vinyl Chloride	2.007	62	1014	0.32	ug/L	81
5) Bromomethane	0.000		0	N.D.	d	
6) Chloroethane	0.000		0	N.D.	d	
7) Trichlorofluoromethane	2.676	101	995	0.27	ug/L	86
8) Ethanol	0.000		0	N.D.	d	
9) 1,1-Dichloroethene	3.242	61	1077	0.34	ug/L	93
10) Carbon Disulfide	3.260	76	2039	0.38	ug/L	89
11) Freon 113	0.000		0	N.D.	d	
12) Iodomethane	0.000		0	N.D.		
13) Acrolein	0.000		0	N.D.	d	
14) Methylene Chloride	3.881	84	3778	1.38	ug/L	95
15) Acetone	0.000		0	N.D.	d	
16) t-1,2-Dichloroethene	4.051	61	1032	0.35	ug/L	98
17) n-Hexane	0.000		0	N.D.		
18) Methyl-tert-butyl-ether	4.185	73	2633	0.52	ug/L	81
19) tert-Butanol (TBA)	4.307	59	11068	No Calib		
20) Diisopropyl ether (DIPE)	0.000		0	N.D.	d	
21) 1,1-Dichloroethane	4.690	63	1280	0.32	ug/L	89
22) Acrylonitrile	0.000		0	N.D.	d	
23) Ethyl-tert-butyl ether...	0.000		0	N.D.	d	
24) Vinyl Acetate	0.000		0	N.D.	d	
25) c-1,2-Dichloroethene	5.250	61	1145	0.39	ug/L	95
26) 2,2-Dichloropropane	0.000		0	N.D.	d	
27) Bromochloromethane	5.450	130	437	0.29	ug/L	94
28) Chloroform	5.542	83	1469	0.35	ug/L	87
29) Carbon Tetrachloride	5.669	117	643	0.26	ug/L	80
30) Tetrahydrofuran	0.000		0	N.D.	d	
31) 1,1,1-Trichloroethane	5.742	97	1087	0.37	ug/L	93
33) 1,1-Dichloropropene	5.870	75	1102	0.41	ug/L	95
34) 2-Butanone (MEK)	0.000		0	N.D.	d	
35) Benzene	6.132	78	3614	0.41	ug/L	96
36) tert-Amyl methyl ether...	0.000		0	N.D.	d	
37) 1,2-Dichloroethane (EDC)	6.351	62	1039	0.34	ug/L	87
38) iso-Butyl Alcohol	0.000		0	N.D.	d	
40) Trichloroethene (TCE)	6.752	130	770	0.32	ug/L	88
41) Tert-Amyl-Ethyl-Ether ...	0.000		0	N.D.	d	
42) Dibromomethane	7.209	93	433	0.28	ug/L	84
43) 1,2-Dichloropropane	7.312	63	812	0.33	ug/L	82
44) Bromodichloromethane	7.391	83	949	0.34	ug/L	92
46) 2-Chloroethyl Vinyl Ether	0.000		0	N.D.	d	
47) c-1,3-Dichloropropene	8.097	75	1097	0.66	ug/L	92

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062022.D
Acq On : 20 Jun 2019 7:10 pm
Operator : MM
Sample : 9F20044-CAL3
Misc : 1X 5mL 0.4/0.8PPB VOCR+OXY
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 09:55:23 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 08:57:41 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Toluene	8.364	91	3651	0.40	ug/L		94
50) Tetrachloroethene (PCE)	8.809	166	702	0.34	ug/L		87
51) 4-Methyl-2-Pentanone (...	8.815	43	2659	0.85	ug/L		98
52) t-1,3-Dichloropropene	8.845	75	1047	0.77	ug/L		87
53) 1,1,2-Trichloroethane	9.009	97	686	0.32	ug/L		96
54) Dibromochloromethane	9.192	129	565	0.29	ug/L		96
55) 1,3-Dichloropropane	9.295	76	1270	0.37	ug/L		92
56) 1,2-Dibromoethane (EDB)	9.441	107	766	0.37	ug/L		94
57) 2-Hexanone	9.666	43	1999	2.51	ug/L		88
58) Chlorobenzene	9.934	112	2135	0.35	ug/L	#	72
59) Ethylbenzene	9.958	91	3623	0.39	ug/L		94
60) 1,1,1,2-Tetrachloroethane	9.995	131	526	0.29	ug/L		83
61) m,p-Xylenes (2)	10.092	91	5389	0.94	ug/L		99
62) o-Xylene	10.475	91	2671	0.53	ug/L		97
63) Styrene	10.524	104	1902	0.61	ug/L		91
64) Bromoform	0.000		0	N.D.	d		
65) Isopropylbenzene	10.737	105	3170	0.80	ug/L		98
68) Bromobenzene	11.066	156	864	0.40	ug/L		85
69) n-Propylbenzene	11.078	91	3601	0.39	ug/L		98
70) 1,1,2,2-Tetrachloroethane	11.145	85	707	0.37	ug/L		86
71) 2-Chlorotoluene	11.212	126	771	0.40	ug/L	#	80
72) 1,3,5-Trimethylbenzene	11.236	105	2531	0.75	ug/L		96
73) 1,2,3-Trichloropropane	11.254	110	243	0.25	ug/L	#	81
74) t-1,4-Dichloro-2-butene	11.285	53	218	0.35	ug/L	#	65
75) 4-Chlorotoluene	11.345	91	2288	0.40	ug/L		87
76) tert-Butylbenzene	11.485	91	1379	0.74	ug/L		91
77) 1,2,4-Trimethylbenzene	11.540	105	2364	0.63	ug/L		88
78) sec-Butylbenzene	11.625	105	3002	0.60	ug/L		98
79) 4-Isopropyltoluene	11.729	119	2328	0.65	ug/L		99
80) 1,3-Dichlorobenzene	11.802	146	1483	0.41	ug/L		87
81) 1,4-Dichlorobenzene	11.869	146	1589	0.37	ug/L	#	72
82) n-Butylbenzene	12.051	91	2284	0.65	ug/L		97
83) 1,2-Dichlorobenzene	12.185	146	1424	0.41	ug/L		89
84) 1,2-Dibromo-3-Chloropr...	0.000		0	N.D.	d		
85) Hexachlorobutadiene	0.000		0	N.D.			
86) 1,2,4-Trichlorobenzene	13.359	180	646	1.00	ug/L		82
87) Naphthalene	13.633	128	2544	1.05	ug/L		81
88) 1,2,3-Trichlorobenzene	13.791	180	669	1.00	ug/L		92

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062022.D
Acq On : 20 Jun 2019 7:10 pm
Operator : MM
Sample : 9F20044-CAL3
Misc : 1X 5mL 0.4/0.8PPB VOCR+OXY
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 09:45:50 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 08:57:41 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.223	168	216322	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	9.916	117	322309	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	11.856	152	147216	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	5.718	111	114168	44.82	ug/L		0.00
39) 1,4-Difluorobenzene (S)	6.789	114	354384	45.70	ug/L		0.00
48) Toluene-d8 (S)	8.304	98	421971	49.38	ug/L		0.00
67) 4-Bromofluorobenzene (S)	10.980	174	123411	54.88	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.685	85	715	0.29	ug/L		79
3) Chloromethane	1.904	50	1399	0.38	ug/L		80
4) Vinyl Chloride	2.007	62	1014	0.32	ug/L		81
5) Bromomethane	2.372	96	806	0.49	ug/L		86
6) Chloroethane	2.518	64	476	Below Cal		#	52
7) Trichlorofluoromethane	2.676	101	995	0.27	ug/L		86
8) Ethanol	3.242	45	1544	No Calib			
9) 1,1-Dichloroethene	3.242	61	1077	0.34	ug/L		93
10) Carbon Disulfide	3.260	76	2039	0.38	ug/L		89
11) Freon 113	3.303	101	595	0.27	ug/L		91
12) Iodomethane	0.000		0	N.D.			
13) Acrolein	3.625	56	343	0.57	ug/L	#	57
14) Methylene Chloride	3.881	84	3778	1.38	ug/L		95
15) Acetone	3.954	43	1672	1.30	ug/L		92
16) t-1,2-Dichloroethene	4.051	61	1032	0.35	ug/L		98
17) n-Hexane	0.000		0	N.D.			
18) Methyl-tert-butyl-ether	4.185	73	2633	0.52	ug/L		81
19) tert-Butanol (TBA)	4.307	59	11068	No Calib			
20) Diisopropyl ether (DIPE)	4.587	45	673	No Calib			
21) 1,1-Dichloroethane	4.690	63	1280	0.32	ug/L		89
22) Acrylonitrile	4.757	53	286	0.21	ug/L	#	15
23) Ethyl-tert-butyl ether...	4.952	59	566	No Calib		#	
24) Vinyl Acetate	4.982	43	1760	3.38	ug/L		74
25) c-1,2-Dichloroethene	5.250	61	1145	0.39	ug/L		95
26) 2,2-Dichloropropane	5.365	77	1213	0.71	ug/L		85
27) Bromochloromethane	5.450	130	437	0.29	ug/L		94
28) Chloroform	5.542	83	1469	0.35	ug/L		87
29) Carbon Tetrachloride	5.669	117	643	0.26	ug/L		80
30) Tetrahydrofuran	5.706	42	583	0.48	ug/L	#	72
31) 1,1,1-Trichloroethane	5.742	97	1087	0.37	ug/L		93
33) 1,1-Dichloropropene	5.870	75	1102	0.41	ug/L		95
34) 2-Butanone (MEK)	5.870	43	1723	0.95	ug/L		92
35) Benzene	6.132	78	3614	0.41	ug/L		96
36) tert-Amyl methyl ether...	6.247	73	657	No Calib		#	
37) 1,2-Dichloroethane (EDC)	6.351	62	1039	0.34	ug/L		87
38) iso-Butyl Alcohol	6.387	43	1712	8.17	ug/L		82
40) Trichloroethene (TCE)	6.752	130	770	0.32	ug/L		88
41) Tert-Amyl-Ethyl-Ether ...	7.008	59	316	No Calib		#	
42) Dibromomethane	7.209	93	433	0.28	ug/L		84
43) 1,2-Dichloropropane	7.312	63	812	0.33	ug/L		82
44) Bromodichloromethane	7.391	83	949	0.34	ug/L		92
46) 2-Chloroethyl Vinyl Ether	8.030	63	479	2.54	ug/L	#	100
47) c-1,3-Dichloropropene	8.097	75	1097	0.66	ug/L		92

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062022.D
Acq On : 20 Jun 2019 7:10 pm
Operator : MM
Sample : 9F20044-CAL3
Misc : 1X 5mL 0.4/0.8PPB VOCR+OXY
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 09:45:50 2019
Quant Method : C:\msdchem\1\methods\~~VI190621W+.~~M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 08:57:41 2019
Response via : Initial Calibration

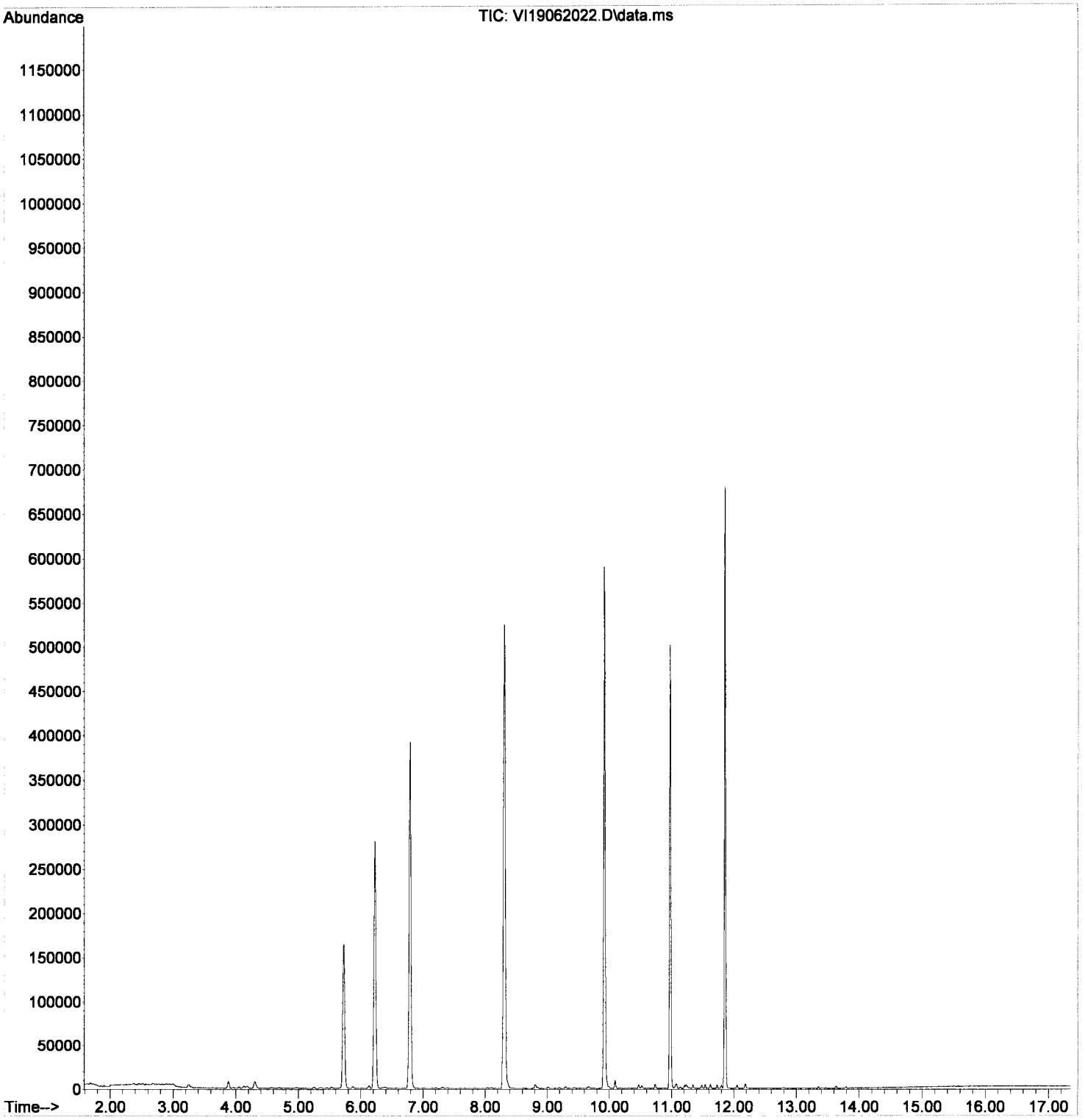
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Toluene	8.364	91	3651	0.40	ug/L		94
50) Tetrachloroethene (PCE)	8.809	166	702	0.34	ug/L		87
51) 4-Methyl-2-Pentanone (...	8.815	43	2659	0.85	ug/L		98
52) t-1,3-Dichloropropene	8.845	75	1047	0.77	ug/L		87
53) 1,1,2-Trichloroethane	9.009	97	686	0.32	ug/L		96
54) Dibromochloromethane	9.192	129	565	0.29	ug/L		96
55) 1,3-Dichloropropane	9.295	76	1270	0.37	ug/L		92
56) 1,2-Dibromoethane (EDB)	9.441	107	766	0.37	ug/L		94
57) 2-Hexanone	9.666	43	1999	2.51	ug/L		88
58) Chlorobenzene	9.934	112	2135	0.35	ug/L	#	72
59) Ethylbenzene	9.958	91	3623	0.39	ug/L		94
60) 1,1,1,2-Tetrachloroethane	9.995	131	526	0.29	ug/L		83
61) m,p-Xylenes (2)	10.092	91	5389	0.94	ug/L		99
62) o-Xylene	10.475	91	2671	0.53	ug/L		97
63) Styrene	10.524	104	1902	0.61	ug/L		91
64) Bromoform	10.536	173	234	0.26	ug/L	#	36
65) Isopropylbenzene	10.737	105	3170	0.80	ug/L		98
68) Bromobenzene	11.066	156	864	0.40	ug/L		85
69) n-Propylbenzene	11.078	91	3601	0.39	ug/L		98
70) 1,1,2,2-Tetrachloroethane	11.145	85	707	0.37	ug/L		86
71) 2-Chlorotoluene	11.212	126	771	0.40	ug/L	#	80
72) 1,3,5-Trimethylbenzene	11.236	105	2531	0.75	ug/L		96
73) 1,2,3-Trichloropropane	11.254	110	243	0.25	ug/L	#	81
74) t-1,4-Dichloro-2-butene	11.285	53	218	0.35	ug/L	#	65
75) 4-Chlorotoluene	11.345	91	2288	0.40	ug/L		87
76) tert-Butylbenzene	11.485	91	1379	0.74	ug/L		91
77) 1,2,4-Trimethylbenzene	11.540	105	2364	0.63	ug/L		88
78) sec-Butylbenzene	11.625	105	3002	0.60	ug/L		98
79) 4-Isopropyltoluene	11.729	119	2328	0.65	ug/L		99
80) 1,3-Dichlorobenzene	11.802	146	1483	0.41	ug/L		87
81) 1,4-Dichlorobenzene	11.869	146	1589	0.37	ug/L	#	72
82) n-Butylbenzene	12.051	91	2284	0.65	ug/L		97
83) 1,2-Dichlorobenzene	12.185	146	1424	0.41	ug/L		89
84) 1,2-Dibromo-3-Chloropr...	12.805	157	116	0.76	ug/L	#	52
85) Hexachlorobutadiene	0.000		0	N.D.			
86) 1,2,4-Trichlorobenzene	13.359	180	646	1.00	ug/L		82
87) Naphthalene	13.633	128	2544	1.05	ug/L		81
88) 1,2,3-Trichlorobenzene	13.791	180	669	1.00	ug/L		92

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062022.D
Acq On : 20 Jun 2019 7:10 pm
Operator : MM
Sample : 9F20044-CAL3
Misc : 1X 5mL 0.4/0.8PPB VOCR+OXY
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 09:45:50 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 08:57:41 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062023.D
Acq On : 20 Jun 2019 7:37 pm
Operator : MM
Sample : 9F20044-CAL4
Misc : 1X 5mL 1/2PPB VOCR+OXY
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 09:56:42 2019
Quant Method : C:\msdchem\1\methods\~~VI190621W+.~~M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 08:57:41 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.223	168	212184	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	9.916	117	321130	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	11.856	152	145672	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	5.718	111	113642	45.49	ug/L		0.00
39) 1,4-Difluorobenzene (S)	6.789	114	356332	46.85	ug/L		0.00
48) Toluene-d8 (S)	8.303	98	417568	48.99	ug/L		0.00
67) 4-Bromofluorobenzene (S)	10.980	174	121837	54.75	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.685	85	1914	0.79	ug/L		99
3) Chloromethane	1.898	50	2855	0.79	ug/L		92
4) Vinyl Chloride	2.001	62	2289	0.74	ug/L		91
5) Bromomethane	2.366	96	1674	1.05	ug/L		85
6) Chloroethane	2.506	64	908	Below Cal			86
7) Trichlorofluoromethane	2.670	101	2781	0.78	ug/L		99
8) Ethanol	3.242	45	3359	No Calib			
9) 1,1-Dichloroethene	3.242	61	2735	0.89	ug/L		96
10) Carbon Disulfide	3.254	76	4926	0.94	ug/L		92
11) Freon 113	3.291	101	1682	0.78	ug/L		95
12) Iodomethane	0.000		0	N.D.	d		
13) Acrolein	0.000		0	N.D.	d		
14) Methylene Chloride	3.881	84	5068	1.89	ug/L		95
15) Acetone	0.000		0	N.D.	d		
16) t-1,2-Dichloroethene	4.045	61	2591	0.90	ug/L		98
17) n-Hexane	4.130	86	322	2.29	ug/L	#	86
18) Methyl-tert-butyl-ether	4.173	73	6733	1.35	ug/L		91
19) tert-Butanol (TBA)	4.301	59	28689	No Calib			
20) Diisopropyl ether (DIPE)	4.574	45	1806	No Calib			
21) 1,1-Dichloroethane	4.684	63	3536	0.91	ug/L		89
22) Acrylonitrile	4.763	53	1079	0.80	ug/L		92
23) Ethyl-tert-butyl ether...	4.945	59	1607	No Calib			
24) Vinyl Acetate	4.976	43	4452	4.80	ug/L		87
25) c-1,2-Dichloroethene	5.256	61	2829	0.99	ug/L		94
26) 2,2-Dichloropropane	5.359	77	2775	1.65	ug/L		96
27) Bromochloromethane	5.450	130	1297	0.88	ug/L		87
28) Chloroform	5.529	83	3614	0.88	ug/L		93
29) Carbon Tetrachloride	5.663	117	2061	0.85	ug/L		86
30) Tetrahydrofuran	0.000		0	N.D.	d		
31) 1,1,1-Trichloroethane	5.736	97	3002	1.03	ug/L		97
33) 1,1-Dichloropropene	5.876	75	2702	1.03	ug/L		96
34) 2-Butanone (MEK)	5.870	43	3724	2.09	ug/L		95
35) Benzene	6.126	78	8486	0.98	ug/L		94
36) tert-Amyl methyl ether...	6.266	73	1716	No Calib			
37) 1,2-Dichloroethane (EDC)	6.345	62	2943	0.97	ug/L		90
38) iso-Butyl Alcohol	0.000		0	N.D.	d		
40) Trichloroethene (TCE)	6.746	130	2094	0.89	ug/L		95
41) Tert-Amyl-Ethyl-Ether ...	7.002	59	1175	No Calib			
42) Dibromomethane	7.202	93	1305	0.86	ug/L		82
43) 1,2-Dichloropropane	7.312	63	2194	0.92	ug/L		86
44) Bromodichloromethane	7.391	83	2265	0.83	ug/L		87
46) 2-Chloroethyl Vinyl Ether	8.030	63	1514	3.68	ug/L	#	100
47) c-1,3-Dichloropropene	8.103	75	3024	1.51	ug/L		87

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062023.D
Acq On : 20 Jun 2019 7:37 pm
Operator : MM
Sample : 9F20044-CAL4
Misc : 1X 5mL 1/2PPB VOCR+OXY
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 09:56:42 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 08:57:41 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Toluene	8.364	91	8763	0.96	ug/L		96
50) Tetrachloroethene (PCE)	8.802	166	2059	1.00	ug/L		82
51) 4-Methyl-2-Pentanone (...	8.808	43	6582	2.11	ug/L		92
52) t-1,3-Dichloropropene	8.845	75	2700	1.53	ug/L		92
53) 1,1,2-Trichloroethane	9.015	97	1850	0.86	ug/L		97
54) Dibromochloromethane	9.198	129	1527	0.78	ug/L		93
55) 1,3-Dichloropropane	9.301	76	3534	1.04	ug/L		93
56) 1,2-Dibromoethane (EDB)	9.429	107	2008	0.99	ug/L		98
57) 2-Hexanone	9.660	43	4754	3.56	ug/L		96
58) Chlorobenzene	9.934	112	5419	0.89	ug/L		84
59) Ethylbenzene	9.958	91	9234	1.00	ug/L		99
60) 1,1,1,2-Tetrachloroethane	9.989	131	1352	0.75	ug/L		75
61) m,p-Xylenes (2)	10.092	91	13780	2.06	ug/L		98
62) o-Xylene	10.469	91	6999	1.14	ug/L		97
63) Styrene	10.518	104	5129	1.16	ug/L		90
64) Bromoform	10.548	173	864	0.81	ug/L		89
65) Isopropylbenzene	10.737	105	8025	1.37	ug/L		98
68) Bromobenzene	11.059	156	2205	1.03	ug/L		87
69) n-Propylbenzene	11.078	91	9689	1.05	ug/L		95
70) 1,1,2,2-Tetrachloroethane	11.145	85	1857	0.98	ug/L		93
71) 2-Chlorotoluene	11.211	126	1852	0.98	ug/L	#	79
72) 1,3,5-Trimethylbenzene	11.236	105	6421	1.34	ug/L		95
73) 1,2,3-Trichloropropane	11.254	110	858	0.91	ug/L		90
74) t-1,4-Dichloro-2-butene	11.284	53	668	1.07	ug/L	#	65
75) 4-Chlorotoluene	11.339	91	6153	1.08	ug/L		91
76) tert-Butylbenzene	11.485	91	3735	1.41	ug/L		95
77) 1,2,4-Trimethylbenzene	11.540	105	6535	1.28	ug/L		94
78) sec-Butylbenzene	11.625	105	8087	1.23	ug/L		99
79) 4-Isopropyltoluene	11.729	119	6051	1.26	ug/L		97
80) 1,3-Dichlorobenzene	11.802	146	3906	1.08	ug/L		96
81) 1,4-Dichlorobenzene	11.868	146	4031	0.95	ug/L		82
82) n-Butylbenzene	12.051	91	5420	1.22	ug/L		98
83) 1,2-Dichlorobenzene	12.185	146	3854	1.12	ug/L		99
84) 1,2-Dibromo-3-Chloropr...	12.805	157	404	1.22	ug/L	#	69
85) Hexachlorobutadiene	13.310	223	435	1.00	ug/L		89
86) 1,2,4-Trichlorobenzene	13.347	180	1991	1.74	ug/L		88
87) Naphthalene	13.633	128	6018	1.64	ug/L		96
88) 1,2,3-Trichlorobenzene	13.791	180	1982	1.71	ug/L		96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062023.D
Acq On : 20 Jun 2019 7:37 pm
Operator : MM
Sample : 9F20044-CAL4
Misc : 1X 5mL 1/2PPB VOCR+OXY
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 09:45:54 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 08:57:41 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.223	168	212184	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	9.916	117	321130	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	11.856	152	145672	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	5.718	111	113642	45.49	ug/L		0.00
39) 1,4-Difluorobenzene (S)	6.789	114	356332	46.85	ug/L		0.00
48) Toluene-d8 (S)	8.303	98	417568	48.99	ug/L		0.00
67) 4-Bromofluorobenzene (S)	10.980	174	121837	54.75	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.685	85	1914	0.79	ug/L		99
3) Chloromethane	1.898	50	2855	0.79	ug/L		92
4) Vinyl Chloride	2.001	62	2289	0.74	ug/L		91
5) Bromomethane	2.366	96	1674	1.05	ug/L		85
6) Chloroethane	2.506	64	908	Below Cal			86
7) Trichlorofluoromethane	2.670	101	2781	0.78	ug/L		99
8) Ethanol	3.242	45	3359	No Calib			
9) 1,1-Dichloroethene	3.242	61	2735	0.89	ug/L		96
10) Carbon Disulfide	3.254	76	4926	0.94	ug/L		92
11) Freon 113	3.291	101	1682	0.78	ug/L		95
12) Iodomethane	3.394	142	318	6.03	ug/L	#	47
13) Acrolein	3.631	56	618	1.04	ug/L	#	36
14) Methylene Chloride	3.881	84	5068	1.89	ug/L		95
15) Acetone	3.954	43	2969	2.35	ug/L		100
16) t-1,2-Dichloroethene	4.045	61	2591	0.90	ug/L		98
17) n-Hexane	4.130	86	322	2.29	ug/L	#	86
18) Methyl-tert-butyl-ether	4.173	73	6733	1.35	ug/L		91
19) tert-Butanol (TBA)	4.301	59	28689	No Calib			
20) Diisopropyl ether (DIPE)	4.574	45	1806	No Calib			
21) 1,1-Dichloroethane	4.684	63	3536	0.91	ug/L		89
22) Acrylonitrile	4.763	53	1079	0.80	ug/L		92
23) Ethyl-tert-butyl ether...	4.945	59	1607	No Calib			
24) Vinyl Acetate	4.976	43	4452	4.80	ug/L		87
25) c-1,2-Dichloroethene	5.256	61	2829	0.99	ug/L		94
26) 2,2-Dichloropropane	5.359	77	2775	1.65	ug/L		96
27) Bromochloromethane	5.450	130	1297	0.88	ug/L		87
28) Chloroform	5.529	83	3614	0.88	ug/L		93
29) Carbon Tetrachloride	5.663	117	2061	0.85	ug/L		86
30) Tetrahydrofuran	5.712	42	1144	0.96	ug/L		92
31) 1,1,1-Trichloroethane	5.736	97	3002	1.03	ug/L		97
33) 1,1-Dichloropropene	5.876	75	2702	1.03	ug/L		96
34) 2-Butanone (MEK)	5.870	43	3724	2.09	ug/L		95
35) Benzene	6.126	78	8486	0.98	ug/L		94
36) tert-Amyl methyl ether...	6.266	73	1716	No Calib			
37) 1,2-Dichloroethane (EDC)	6.345	62	2943	0.97	ug/L		90
38) iso-Butyl Alcohol	6.387	43	4246	20.67	ug/L		87
40) Trichloroethene (TCE)	6.746	130	2094	0.89	ug/L		95
41) Tert-Amyl-Ethyl-Ether ...	7.002	59	1175	No Calib			
42) Dibromomethane	7.202	93	1305	0.86	ug/L		82
43) 1,2-Dichloropropane	7.312	63	2194	0.92	ug/L		86
44) Bromodichloromethane	7.391	83	2265	0.83	ug/L		87
46) 2-Chloroethyl Vinyl Ether	8.030	63	1514	3.68	ug/L	#	100
47) c-1,3-Dichloropropene	8.103	75	3024	1.51	ug/L		87

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062023.D
Acq On : 20 Jun 2019 7:37 pm
Operator : MM
Sample : 9F20044-CAL4
Misc : 1X 5mL 1/2PPB VOCR+OXY
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 09:45:54 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 08:57:41 2019
Response via : Initial Calibration

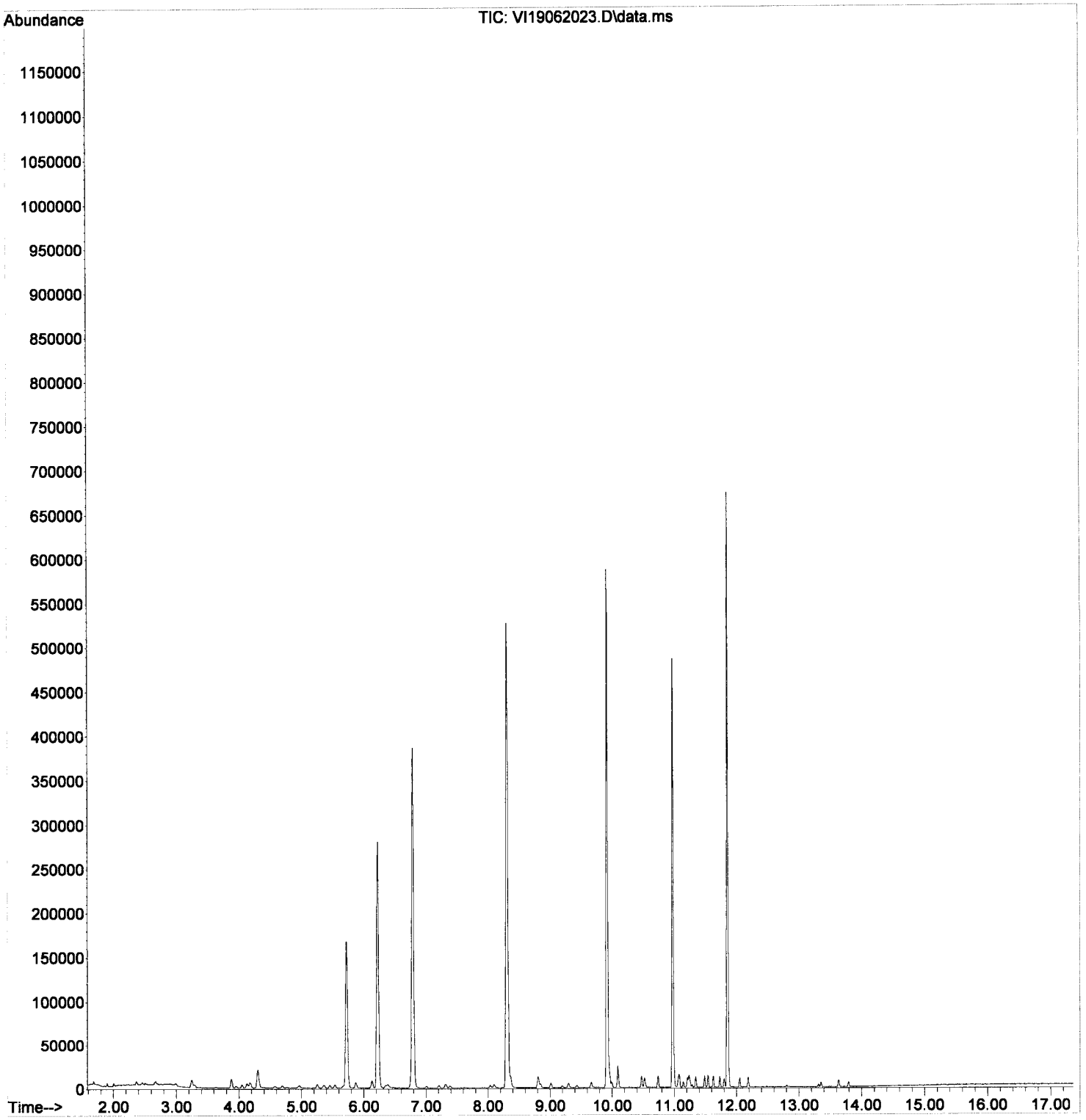
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Toluene	8.364	91	8763	0.96	ug/L		96
50) Tetrachloroethene (PCE)	8.802	166	2059	1.00	ug/L		82
51) 4-Methyl-2-Pentanone (...	8.808	43	6582	2.11	ug/L		92
52) t-1,3-Dichloropropene	8.845	75	2700	1.53	ug/L		92
53) 1,1,2-Trichloroethane	9.015	97	1850	0.86	ug/L		97
54) Dibromochloromethane	9.198	129	1527	0.78	ug/L		93
55) 1,3-Dichloropropane	9.301	76	3534	1.04	ug/L		93
56) 1,2-Dibromoethane (EDB)	9.429	107	2008	0.99	ug/L		98
57) 2-Hexanone	9.660	43	4754	3.56	ug/L		96
58) Chlorobenzene	9.934	112	5419	0.89	ug/L		84
59) Ethylbenzene	9.958	91	9234	1.00	ug/L		99
60) 1,1,1,2-Tetrachloroethane	9.989	131	1352	0.75	ug/L		75
61) m,p-Xylenes (2)	10.092	91	13780	2.06	ug/L		98
62) o-Xylene	10.469	91	6999	1.14	ug/L		97
63) Styrene	10.518	104	5129	1.16	ug/L		90
64) Bromoform	10.548	173	864	0.81	ug/L		89
65) Isopropylbenzene	10.737	105	8025	1.37	ug/L		98
68) Bromobenzene	11.059	156	2205	1.03	ug/L		87
69) n-Propylbenzene	11.078	91	9689	1.05	ug/L		95
70) 1,1,2,2-Tetrachloroethane	11.145	85	1857	0.98	ug/L		93
71) 2-Chlorotoluene	11.211	126	1852	0.98	ug/L	#	79
72) 1,3,5-Trimethylbenzene	11.236	105	6421	1.34	ug/L		95
73) 1,2,3-Trichloropropane	11.254	110	858	0.91	ug/L		90
74) t-1,4-Dichloro-2-butene	11.284	53	668	1.07	ug/L	#	65
75) 4-Chlorotoluene	11.339	91	6153	1.08	ug/L		91
76) tert-Butylbenzene	11.485	91	3735	1.41	ug/L		95
77) 1,2,4-Trimethylbenzene	11.540	105	6535	1.28	ug/L		94
78) sec-Butylbenzene	11.625	105	8087	1.23	ug/L		99
79) 4-Isopropyltoluene	11.729	119	6051	1.26	ug/L		97
80) 1,3-Dichlorobenzene	11.802	146	3906	1.08	ug/L		96
81) 1,4-Dichlorobenzene	11.868	146	4031	0.95	ug/L		82
82) n-Butylbenzene	12.051	91	5420	1.22	ug/L		98
83) 1,2-Dichlorobenzene	12.185	146	3854	1.12	ug/L		99
84) 1,2-Dibromo-3-Chloropr...	12.805	157	404	1.22	ug/L	#	69
85) Hexachlorobutadiene	13.310	223	435	1.00	ug/L		89
86) 1,2,4-Trichlorobenzene	13.347	180	1991	1.74	ug/L		88
87) Naphthalene	13.633	128	6018	1.64	ug/L		96
88) 1,2,3-Trichlorobenzene	13.791	180	1982	1.71	ug/L		96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062023.D
Acq On : 20 Jun 2019 7:37 pm
Operator : MM
Sample : 9F20044-CAL4
Misc : 1X 5mL 1/2PPB VOCR+OXY
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 09:45:54 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 08:57:41 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062024.D
Acq On : 20 Jun 2019 8:04 pm
Operator : MM
Sample : 9F20044-CAL5
Misc : 1X 5mL 2/4PPB VOCR+OXY
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 09:45:57 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 08:57:41 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.223	168	207120	50.00 ug/L		0.00
45) Chlorobenzene-d5 (I)	9.916	117	311234	50.00 ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	11.856	152	142034	50.00 ug/L		0.00
System Monitoring Compounds						
32) Dibromofluoromethane (S)	5.718	111	111003	45.52 ug/L		0.00
39) 1,4-Difluorobenzene (S)	6.789	114	346645	46.69 ug/L		0.00
48) Toluene-d8 (S)	8.304	98	408908	49.50 ug/L		0.00
67) 4-Bromofluorobenzene (S)	10.980	174	118488	54.61 ug/L		0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.679	85	4211	1.77 ug/L		93
3) Chloromethane	1.898	50	5408	1.52 ug/L		95
4) Vinyl Chloride	1.995	62	4635	1.54 ug/L		91
5) Bromomethane	2.360	96	2788	1.78 ug/L		97
6) Chloroethane	2.512	64	1914	Below Cal		82
7) Trichlorofluoromethane	2.670	101	5447	1.56 ug/L		96
8) Ethanol	3.236	45	6404	No Calib		
9) 1,1-Dichloroethene	3.236	61	5714	1.91 ug/L		97
10) Carbon Disulfide	3.254	76	9921	1.93 ug/L		97
11) Freon 113	3.291	101	3564	1.70 ug/L		94
12) Iodomethane	3.394	142	593	6.39 ug/L	#	70
13) Acrolein	3.625	56	1243	2.15 ug/L		60
14) Methylene Chloride	3.875	84	7259	2.77 ug/L		96
15) Acetone	3.948	43	4813	3.90 ug/L		99
16) t-1,2-Dichloroethene	4.045	61	5449	1.94 ug/L		92
17) n-Hexane	4.118	86	660	3.15 ug/L	#	82
18) Methyl-tert-butyl-ether	4.173	73	12876	2.65 ug/L		91
19) tert-Butanol (TBA)	4.295	59	56818	No Calib		
20) Diisopropyl ether (DIPE)	4.574	45	3461	No Calib		
21) 1,1-Dichloroethane	4.690	63	7318	1.94 ug/L		92
22) Acrylonitrile	4.757	53	2105	1.60 ug/L		85
23) Ethyl-tert-butyl ether...	4.946	59	3218	No Calib		
24) Vinyl Acetate	4.964	43	9168	7.36 ug/L		97
25) c-1,2-Dichloroethene	5.250	61	5852	2.10 ug/L		95
26) 2,2-Dichloropropane	5.359	77	5539	3.37 ug/L		98
27) Bromochloromethane	5.450	130	2660	1.85 ug/L		97
28) Chloroform	5.530	83	7377	1.85 ug/L		95
29) Carbon Tetrachloride	5.669	117	4035	1.70 ug/L		96
30) Tetrahydrofuran	5.712	42	2546	2.20 ug/L		87
31) 1,1,1-Trichloroethane	5.742	97	5613	1.98 ug/L		92
33) 1,1-Dichloropropene	5.864	75	5432	2.12 ug/L		98
34) 2-Butanone (MEK)	5.870	43	7000	4.03 ug/L		98
35) Benzene	6.126	78	16870	1.99 ug/L		96
36) tert-Amyl methyl ether...	6.266	73	3075	No Calib		
37) 1,2-Dichloroethane (EDC)	6.351	62	5701	1.93 ug/L		90
38) iso-Butyl Alcohol	6.381	43	7793	38.86 ug/L		90
40) Trichloroethene (TCE)	6.746	130	3971	1.72 ug/L		92
41) Tert-Amyl-Ethyl-Ether ...	7.002	59	2362	No Calib		
42) Dibromomethane	7.203	93	2728	1.85 ug/L		89
43) 1,2-Dichloropropane	7.318	63	4334	1.86 ug/L		90
44) Bromodichloromethane	7.385	83	4841	1.81 ug/L		90
46) 2-Chloroethyl Vinyl Ether	8.030	63	3031	5.45 ug/L	#	100
47) c-1,3-Dichloropropene	8.097	75	6162	2.96 ug/L		94

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062024.D
Acq On : 20 Jun 2019 8:04 pm
Operator : MM
Sample : 9F20044-CAL5
Misc : 1X 5mL 2/4PPB VOCR+OXY
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 09:45:57 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 08:57:41 2019
Response via : Initial Calibration

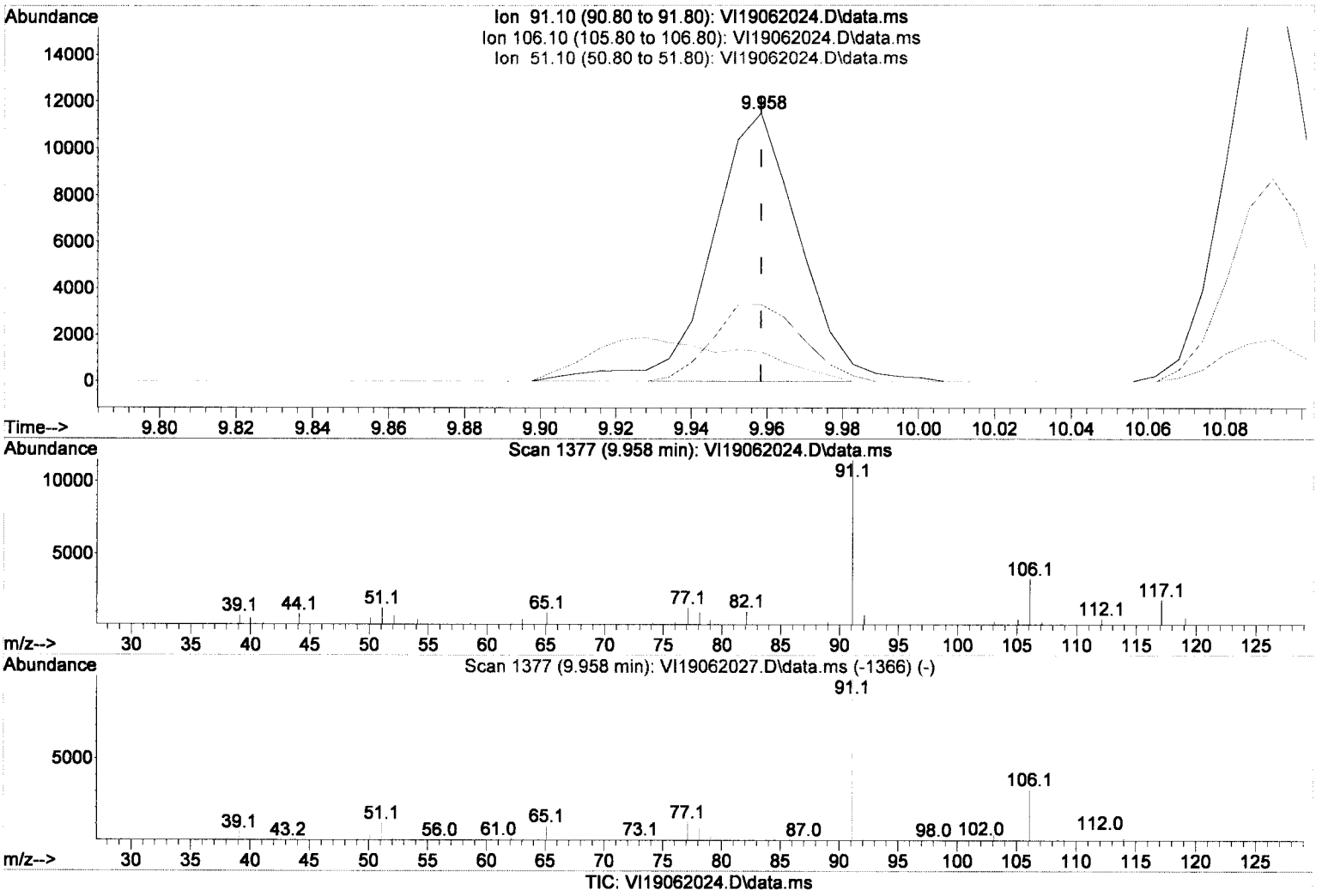
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Toluene	8.364	91	17144	1.94	ug/L		98
50) Tetrachloroethene (PCE)	8.803	166	3980	1.98	ug/L		96
51) 4-Methyl-2-Pentanone (...	8.809	43	12326	4.08	ug/L		96
52) t-1,3-Dichloropropene	8.845	75	5224	2.75	ug/L		95
53) 1,1,2-Trichloroethane	9.015	97	3923	1.88	ug/L		92
54) Dibromochloromethane	9.192	129	3080	1.62	ug/L		98
55) 1,3-Dichloropropane	9.295	76	6955	2.11	ug/L		96
56) 1,2-Dibromoethane (EDB)	9.435	107	4093	2.07	ug/L		94
57) 2-Hexanone	9.660	43	8923	5.26	ug/L		96
58) Chlorobenzene	9.934	112	10769	1.83	ug/L		93
59) Ethylbenzene	9.958	91	18616	2.08	ug/L		97
60) 1,1,1,2-Tetrachloroethane	9.995	131	3145	1.80	ug/L		91
61) m,p-Xylenes (2)	10.092	91	26844	3.89	ug/L		95
62) o-Xylene	10.469	91	14152	2.22	ug/L		97
63) Styrene	10.518	104	10275	2.09	ug/L		88
64) Bromoform	10.542	173	1903	1.74	ug/L		90
65) Isopropylbenzene	10.737	105	16331	2.39	ug/L		97
68) Bromobenzene	11.066	156	4450	2.12	ug/L		84
69) n-Propylbenzene	11.078	91	18778	2.08	ug/L		96
70) 1,1,2,2-Tetrachloroethane	11.145	85	3674	1.99	ug/L		97
71) 2-Chlorotoluene	11.212	126	3795	2.06	ug/L		96
72) 1,3,5-Trimethylbenzene	11.236	105	12170	2.25	ug/L		98
73) 1,2,3-Trichloropropane	11.254	110	1731	1.87	ug/L		90
74) t-1,4-Dichloro-2-butene	11.285	53	1245	2.05	ug/L	#	75
75) 4-Chlorotoluene	11.339	91	11633	2.10	ug/L		95
76) tert-Butylbenzene	11.485	91	7529	2.52	ug/L		89
77) 1,2,4-Trimethylbenzene	11.540	105	12644	2.27	ug/L		94
78) sec-Butylbenzene	11.625	105	15209	2.15	ug/L		97
79) 4-Isopropyltoluene	11.729	119	12207	2.30	ug/L		95
80) 1,3-Dichlorobenzene	11.802	146	7534	2.14	ug/L		95
81) 1,4-Dichlorobenzene	11.869	146	7885	1.90	ug/L		89
82) n-Butylbenzene	12.051	91	10983	2.26	ug/L		95
83) 1,2-Dichlorobenzene	12.185	146	7242	2.15	ug/L		98
84) 1,2-Dibromo-3-Chloropr...	12.806	157	981	2.18	ug/L	#	76
85) Hexachlorobutadiene	13.317	223	934	2.21	ug/L		94
86) 1,2,4-Trichlorobenzene	13.347	180	3993	2.90	ug/L		92
87) Naphthalene	13.633	128	12353	2.77	ug/L		96
88) 1,2,3-Trichlorobenzene	13.791	180	3953	2.81	ug/L		88

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062024.D
Acq On : 20 Jun 2019 8:04 pm
Operator : MM
Sample : 9F20044-CAL5
Misc : 1X 5mL 2/4PPB VOCR+OXY
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 09:45:57 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 08:57:41 2019
Response via : Initial Calibration



TIC: VI19062024.D\data.ms

(59) Ethylbenzene (C)

9.958min (0.000) 2.08 ug/L

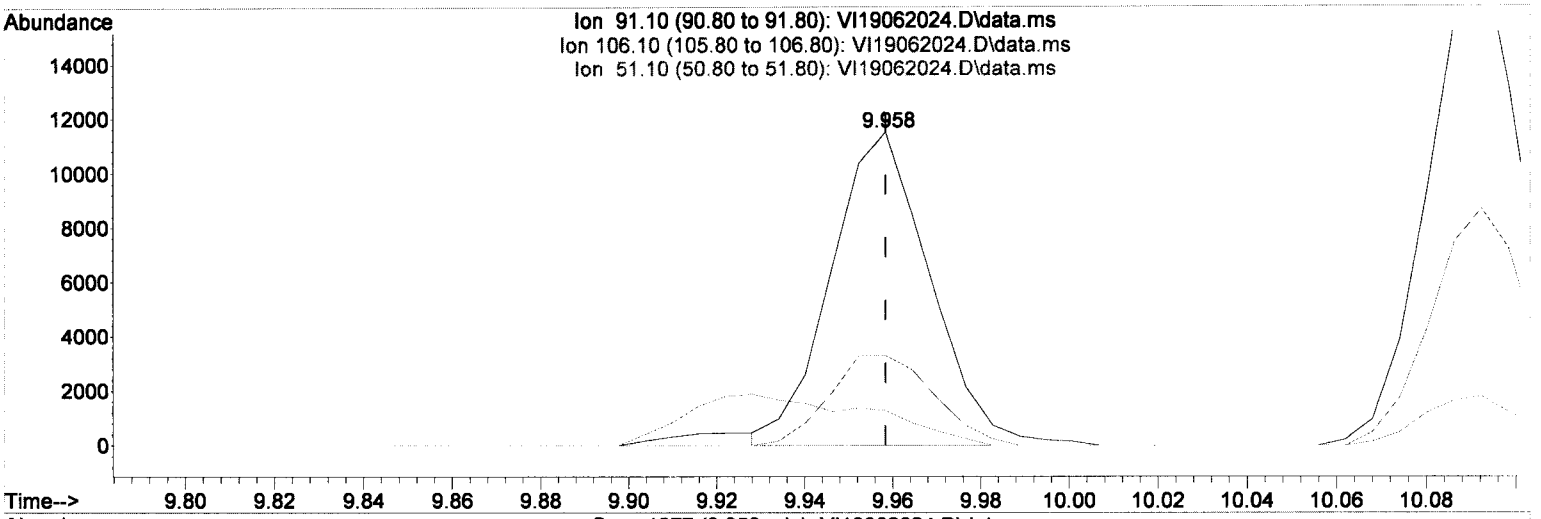
response 18616

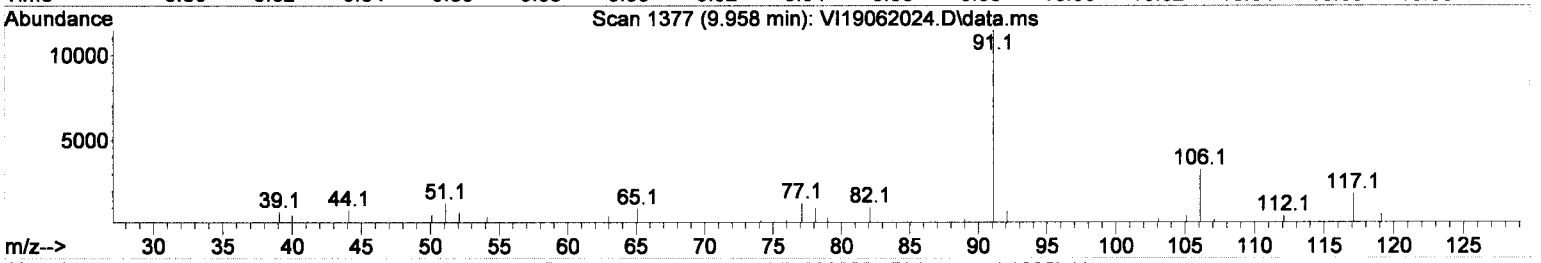
Ion	Exp%	Act%
91.10	100.00	100.00
106.10	30.80	28.69
51.10	10.40	11.18
0.00	0.00	0.00

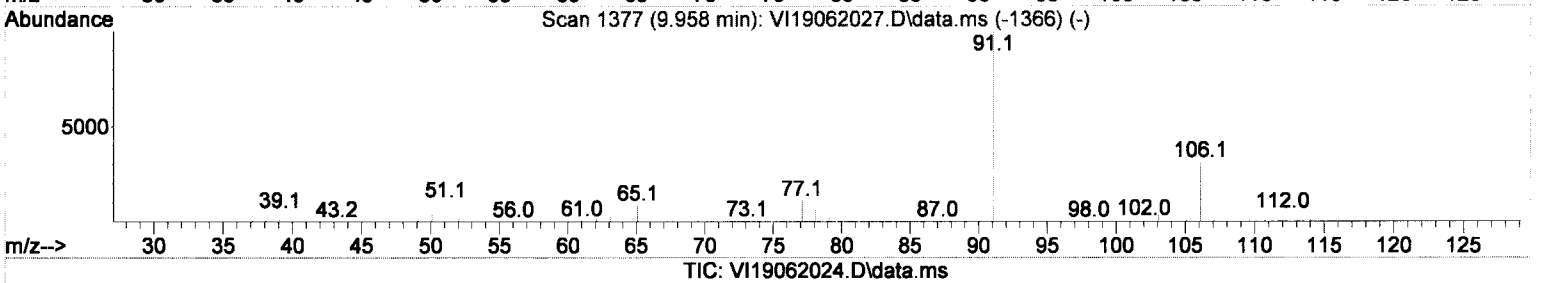
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062024.D
Acq On : 20 Jun 2019 8:04 pm
Operator : MM
Sample : 9F20044-CAL5
Misc : 1X 5mL 2/4PPB VOCR+OXY
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 09:45:57 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 08:57:41 2019
Response via : Initial Calibration







TIC: VI19062024.D\data.ms

(59) Ethylbenzene (C)

9.958min (0.000) 2.00 ug/L m

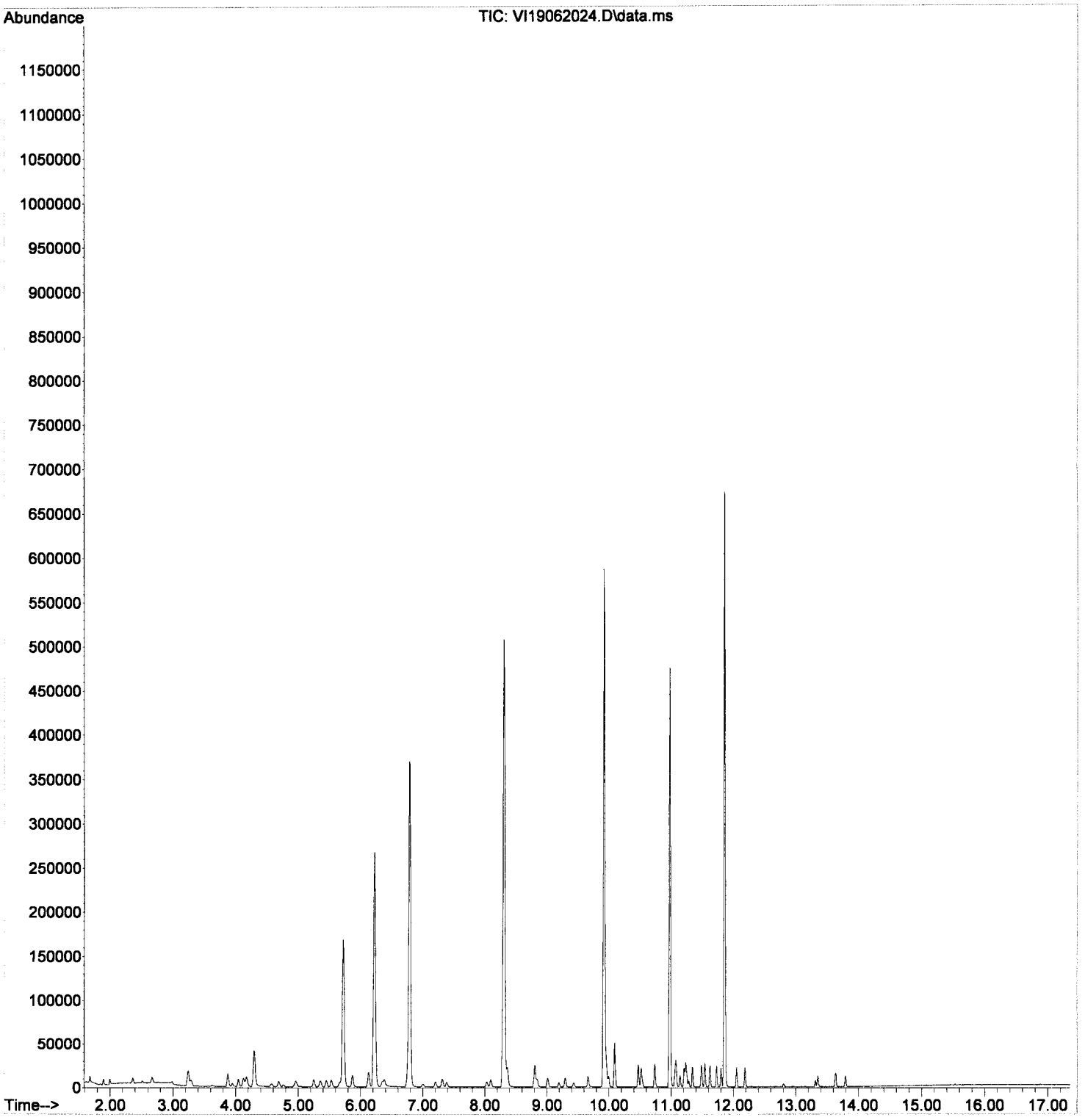
response 17924

Ion	Exp%	Act%
91.10	100.00	100.00
106.10	30.80	28.69
51.10	10.40	11.18
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062024.D
Acq On : 20 Jun 2019 8:04 pm
Operator : MM
Sample : 9F20044-CAL5
Misc : 1X 5mL 2/4PPB VOCR+OXY
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 09:45:57 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 08:57:41 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062025.D
Acq On : 20 Jun 2019 8:31 pm
Operator : MM
Sample : 9F20044-CAL6
Misc : 1X 5mL 5/10PPB VOCR+OXY
ALS Vial : 9 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 09:46:00 2019
Quant Method : C:\msdchem\1\methods\~~VI190621W+~~.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 08:57:41 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.223	168	210483	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	9.916	117	317560	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	11.856	152	146868	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	5.718	111	113201	45.68	ug/L		0.00
39) 1,4-Difluorobenzene (S)	6.789	114	351357	46.57	ug/L		0.00
48) Toluene-d8 (S)	8.303	98	413565	49.07	ug/L		0.00
67) 4-Bromofluorobenzene (S)	10.980	174	122376	54.55	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.685	85	10727	4.44	ug/L		100
3) Chloromethane	1.897	50	12884	3.57	ug/L		96
4) Vinyl Chloride	2.001	62	11994	3.91	ug/L		95
5) Bromomethane	2.366	96	6144	3.87	ug/L		96
6) Chloroethane	2.512	64	4333	3.38	ug/L		84
7) Trichlorofluoromethane	2.670	101	13723	3.87	ug/L		96
8) Ethanol	3.242	45	16135	No Calib			
9) 1,1-Dichloroethene	3.236	61	14113	4.64	ug/L		99
10) Carbon Disulfide	3.254	76	24895	4.78	ug/L		99
11) Freon 113	3.291	101	8855	4.16	ug/L		99
12) Iodomethane	3.388	142	1639	7.68	ug/L	#	83
13) Acrolein	3.631	56	2633	4.48	ug/L		80
14) Methylene Chloride	3.875	84	12982	4.88	ug/L		95
15) Acetone	3.948	43	10828	8.63	ug/L		94
16) t-1,2-Dichloroethene	4.045	61	13534	4.75	ug/L		97
17) n-Hexane	4.130	86	1835	5.99	ug/L	#	87
18) Methyl-tert-butyl-ether	4.179	73	33795	6.85	ug/L		94
19) tert-Butanol (TBA)	4.294	59	145017	No Calib			
20) Diisopropyl ether (DIPE)	4.568	45	8488	No Calib			
21) 1,1-Dichloroethane	4.690	63	17942	4.67	ug/L		95
22) Acrylonitrile	4.757	53	5714	4.26	ug/L		99
23) Ethyl-tert-butyl ether...	4.951	59	8642	No Calib			
24) Vinyl Acetate	4.964	43	23059	14.45	ug/L		99
25) c-1,2-Dichloroethene	5.250	61	14214	5.01	ug/L		94
26) 2,2-Dichloropropane	5.359	77	13609	8.15	ug/L		98
27) Bromochloromethane	5.456	130	7111	4.86	ug/L		91
28) Chloroform	5.535	83	18377	4.53	ug/L		97
29) Carbon Tetrachloride	5.669	117	10336	4.28	ug/L		98
30) Tetrahydrofuran	5.706	42	6018	5.11	ug/L		86
31) 1,1,1-Trichloroethane	5.742	97	14420	5.00	ug/L		97
33) 1,1-Dichloropropene	5.870	75	13797	5.30	ug/L		96
34) 2-Butanone (MEK)	5.864	43	16551	9.38	ug/L		96
35) Benzene	6.126	78	42655	4.94	ug/L		98
36) tert-Amyl methyl ether...	6.253	73	8135	No Calib			
37) 1,2-Dichloroethane (EDC)	6.351	62	14313	4.77	ug/L		93
38) iso-Butyl Alcohol	6.381	43	20716	101.64	ug/L		93
40) Trichloroethene (TCE)	6.746	130	10321	4.40	ug/L		98
41) Tert-Amyl-Ethyl-Ether ...	7.008	59	6227	No Calib			
42) Dibromomethane	7.208	93	6909	4.61	ug/L		95
43) 1,2-Dichloropropane	7.318	63	11150	4.72	ug/L		91
44) Bromodichloromethane	7.385	83	12311	4.53	ug/L		94
46) 2-Chloroethyl Vinyl Ether	8.030	63	8448	11.33	ug/L	#	100
47) c-1,3-Dichloropropene	8.097	75	15503	6.84	ug/L		94

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062025.D
Acq On : 20 Jun 2019 8:31 pm
Operator : MM
Sample : 9F20044-CAL6
Misc : 1X 5mL 5/10PPB VOCR+OXY
ALS Vial : 9 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 09:46:00 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 08:57:41 2019
Response via : Initial Calibration

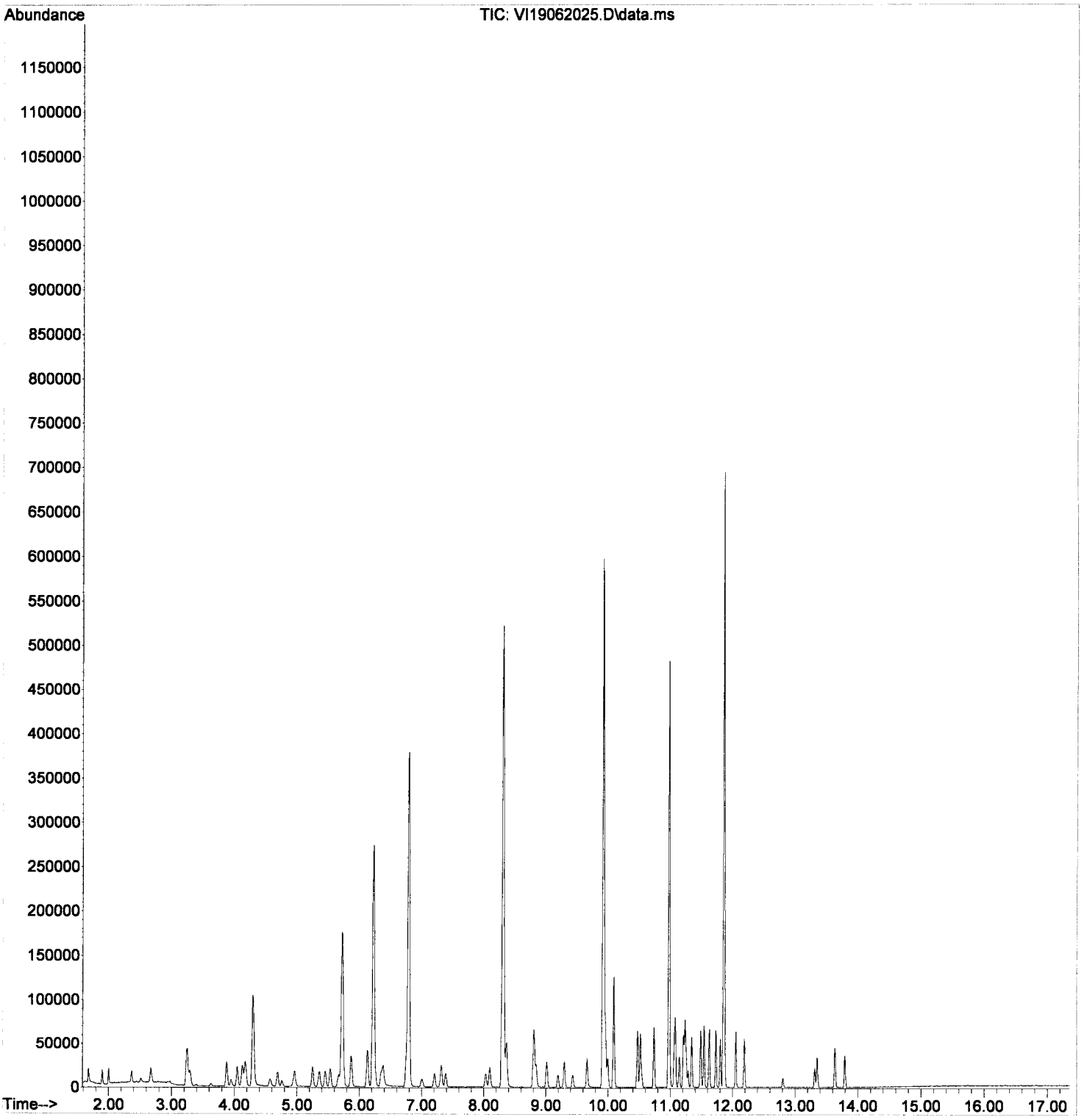
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Toluene	8.364	91	42182	4.68	ug/L		99
50) Tetrachloroethene (PCE)	8.802	166	10061	4.92	ug/L		92
51) 4-Methyl-2-Pentanone (...	8.808	43	31812	10.32	ug/L		98
52) t-1,3-Dichloropropene	8.845	75	13846	6.55	ug/L		96
53) 1,1,2-Trichloroethane	9.009	97	9783	4.61	ug/L		96
54) Dibromochloromethane	9.192	129	8356	4.32	ug/L		99
55) 1,3-Dichloropropane	9.295	76	17813	5.28	ug/L		98
56) 1,2-Dibromoethane (EDB)	9.429	107	10703	5.31	ug/L		92
57) 2-Hexanone	9.660	43	22445	10.40	ug/L		96
58) Chlorobenzene	9.934	112	27201	4.52	ug/L		92
59) Ethylbenzene	9.958	91	46640	5.11	ug/L		98
60) 1,1,1,2-Tetrachloroethane	9.995	131	7859	4.40	ug/L		93
61) m,p-Xylenes (2)	10.092	91	69099	9.46	ug/L		98
62) o-Xylene	10.469	91	35226	5.19	ug/L		97
63) Styrene	10.518	104	26982	4.92	ug/L		93
64) Bromoform	10.542	173	5086	4.37	ug/L		95
65) Isopropylbenzene	10.737	105	41584	5.29	ug/L		99
68) Bromobenzene	11.065	156	10912	5.04	ug/L	#	81
69) n-Propylbenzene	11.078	91	48510	5.21	ug/L		98
70) 1,1,2,2-Tetrachloroethane	11.145	85	9734	5.09	ug/L		99
71) 2-Chlorotoluene	11.211	126	9766	5.12	ug/L		92
72) 1,3,5-Trimethylbenzene	11.236	105	32548	5.22	ug/L		98
73) 1,2,3-Trichloropropane	11.254	110	4458	4.67	ug/L		94
74) t-1,4-Dichloro-2-butene	11.284	53	3644	5.80	ug/L	#	71
75) 4-Chlorotoluene	11.339	91	30340	5.31	ug/L		94
76) tert-Butylbenzene	11.485	91	18913	5.60	ug/L		93
77) 1,2,4-Trimethylbenzene	11.540	105	32738	5.29	ug/L		96
78) sec-Butylbenzene	11.625	105	39995	5.10	ug/L		99
79) 4-Isopropyltoluene	11.729	119	32047	5.39	ug/L		98
80) 1,3-Dichlorobenzene	11.802	146	19276	5.30	ug/L		98
81) 1,4-Dichlorobenzene	11.868	146	20166	4.71	ug/L		94
82) n-Butylbenzene	12.051	91	29388	5.46	ug/L		98
83) 1,2-Dichlorobenzene	12.185	146	18834	5.41	ug/L		98
84) 1,2-Dibromo-3-Chloropr...	12.805	157	2495	4.51	ug/L		72
85) Hexachlorobutadiene	13.310	223	2508	5.74	ug/L		93
86) 1,2,4-Trichlorobenzene	13.353	180	10341	6.26	ug/L		93
87) Naphthalene	13.633	128	33574	6.25	ug/L		98
88) 1,2,3-Trichlorobenzene	13.791	180	10056	5.94	ug/L		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062025.D
Acq On : 20 Jun 2019 8:31 pm
Operator : MM
Sample : 9F20044-CAL6
Misc : 1X 5mL 5/10PPB VOCR+OXY
ALS Vial : 9 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 09:46:00 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 08:57:41 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062026.D
Acq On : 20 Jun 2019 8:58 pm
Operator : MM
Sample : 9F20044-CAL7
Misc : 1X 5mL 10/20PPB VOCR+OXY
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 09:46:03 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 08:57:41 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.223	168	208672	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	9.916	117	309194	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	11.856	152	143770	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	5.718	111	112974	45.98	ug/L		0.00
39) 1,4-Difluorobenzene (S)	6.789	114	346503	46.32	ug/L		0.00
48) Toluene-d8 (S)	8.304	98	406176	49.50	ug/L		0.00
67) 4-Bromofluorobenzene (S)	10.980	174	120665	54.95	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.685	85	22869	9.55	ug/L		99
3) Chloromethane	1.904	50	27212	7.61	ug/L		95
4) Vinyl Chloride	2.001	62	25922	8.52	ug/L		96
5) Bromomethane	2.366	96	12781	8.11	ug/L		96
6) Chloroethane	2.512	64	8771	9.25	ug/L		84
7) Trichlorofluoromethane	2.676	101	29578	8.41	ug/L		98
8) Ethanol	3.242	45	32934	No Calib			
9) 1,1-Dichloroethene	3.242	61	30179	10.00	ug/L		97
10) Carbon Disulfide	3.260	76	53141	10.28	ug/L		99
11) Freon 113	3.291	101	19042	9.03	ug/L		96
12) Iodomethane	3.400	142	4730	11.52	ug/L		94
13) Acrolein	3.631	56	5612	9.64	ug/L		65
14) Methylene Chloride	3.881	84	23309	8.83	ug/L		95
15) Acetone	3.948	43	20886	16.78	ug/L		98
16) t-1,2-Dichloroethene	4.045	61	29093	10.31	ug/L		100
17) n-Hexane	4.130	86	4064	11.50	ug/L	#	78
18) Methyl-tert-butyl-ether	4.173	73	68708	14.05	ug/L		91
19) tert-Butanol (TBA)	4.294	59	295406	No Calib			
20) Diisopropyl ether (DIPE)	4.574	45	17804	No Calib			
21) 1,1-Dichloroethane	4.690	63	38535	10.12	ug/L		98
22) Acrylonitrile	4.757	53	11651	8.77	ug/L		97
23) Ethyl-tert-butyl ether...	4.952	59	17677	No Calib			
24) Vinyl Acetate	4.964	43	42948	24.69	ug/L		97
25) c-1,2-Dichloroethene	5.250	61	30222	10.75	ug/L		94
26) 2,2-Dichloropropane	5.359	77	29277	17.68	ug/L		98
27) Bromochloromethane	5.450	130	14538	10.03	ug/L		83
28) Chloroform	5.536	83	38632	9.60	ug/L		98
29) Carbon Tetrachloride	5.669	117	22754	9.51	ug/L		91
30) Tetrahydrofuran	5.706	42	11859	10.16	ug/L		88
31) 1,1,1-Trichloroethane	5.742	97	30675	10.74	ug/L		95
33) 1,1-Dichloropropene	5.870	75	29419	11.39	ug/L		92
34) 2-Butanone (MEK)	5.864	43	33398	19.09	ug/L		95
35) Benzene	6.132	78	89017	10.40	ug/L		95
36) tert-Amyl methyl ether...	6.259	73	16510	No Calib			
37) 1,2-Dichloroethane (EDC)	6.345	62	29731	9.99	ug/L		93
38) iso-Butyl Alcohol	6.381	43	42610	210.87	ug/L		91
40) Trichloroethene (TCE)	6.752	130	22223	9.57	ug/L		97
41) Tert-Amyl-Ethyl-Ether ...	7.008	59	13457	No Calib			
42) Dibromomethane	7.202	93	14550	9.80	ug/L		90
43) 1,2-Dichloropropane	7.318	63	23246	9.92	ug/L		94
44) Bromodichloromethane	7.385	83	26103	9.68	ug/L		92
46) 2-Chloroethyl Vinyl Ether	8.030	63	17440	21.53	ug/L	#	100
47) c-1,3-Dichloropropene	8.097	75	33223	14.11	ug/L		91

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062026.D
Acq On : 20 Jun 2019 8:58 pm
Operator : MM
Sample : 9F20044-CAL7
Misc : 1X 5mL 10/20PPB VOCR+OXY
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 09:46:03 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 08:57:41 2019
Response via : Initial Calibration

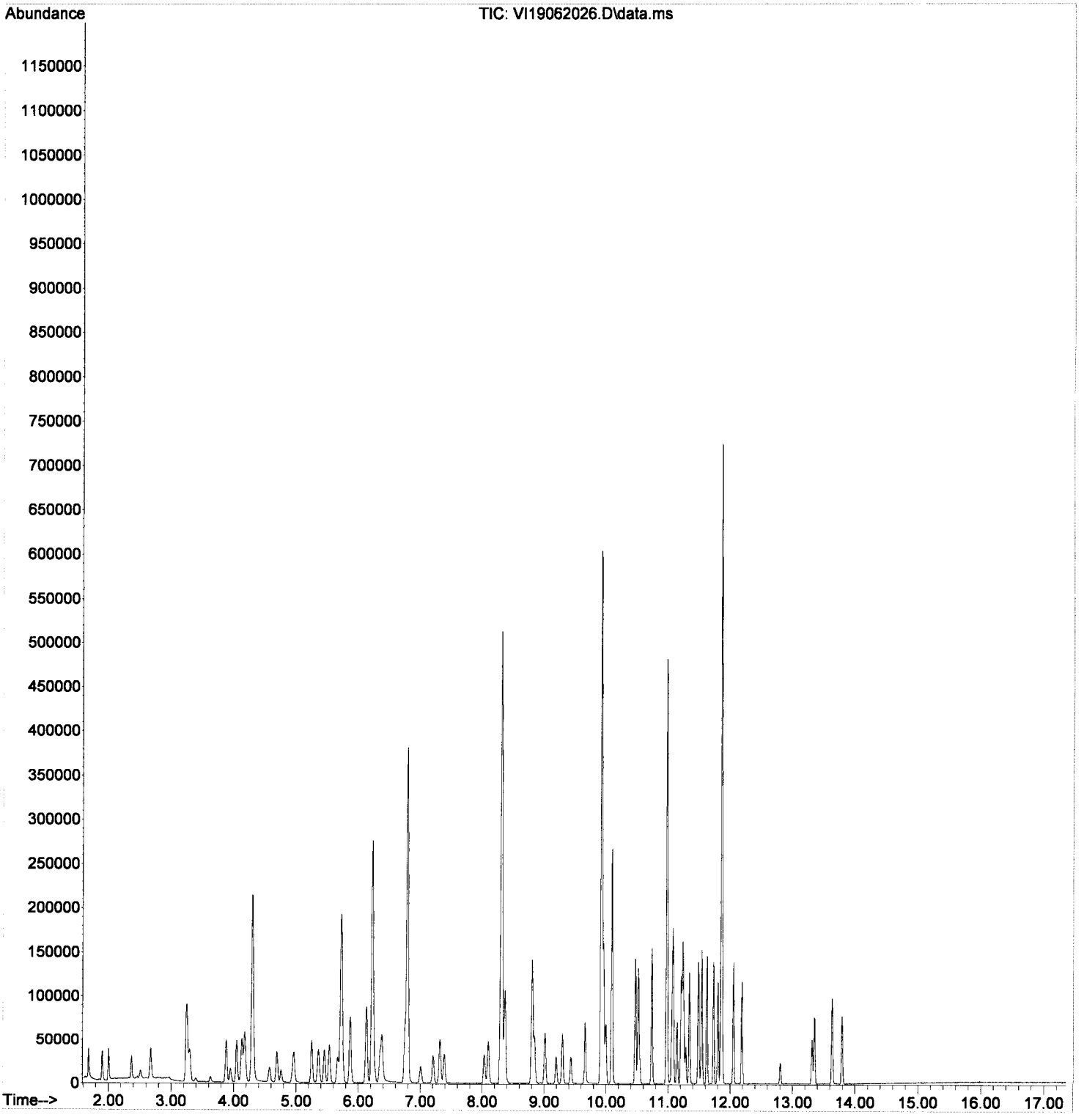
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Toluene	8.364	91	89825	10.24	ug/L		99
50) Tetrachloroethene (PCE)	8.802	166	21224	10.65	ug/L		85
51) 4-Methyl-2-Pentanone (...	8.802	43	63594	21.18	ug/L		99
52) t-1,3-Dichloropropene	8.845	75	29864	13.60	ug/L		96
53) 1,1,2-Trichloroethane	9.015	97	20793	10.05	ug/L		95
54) Dibromochloromethane	9.192	129	17821	9.46	ug/L		97
55) 1,3-Dichloropropane	9.295	76	36030	10.98	ug/L		97
56) 1,2-Dibromoethane (EDB)	9.429	107	22272	11.36	ug/L		93
57) 2-Hexanone	9.660	43	47165	20.45	ug/L		94
58) Chlorobenzene	9.934	112	56373	9.63	ug/L		94
59) Ethylbenzene	9.958	91	97148	10.93	ug/L		99
60) 1,1,1,2-Tetrachloroethane	9.995	131	17145	9.87	ug/L		95
61) m,p-Xylenes (2)	10.092	91	146011	20.20	ug/L		99
62) o-Xylene	10.469	91	75737	11.23	ug/L		96
63) Styrene	10.518	104	58587	10.58	ug/L		93
64) Bromoform	10.542	173	10720	9.03	ug/L		95
65) Isopropylbenzene	10.737	105	90064	11.20	ug/L		100
68) Bromobenzene	11.066	156	23575	11.11	ug/L	#	81
69) n-Propylbenzene	11.078	91	105162	11.53	ug/L		99
70) 1,1,2,2-Tetrachloroethane	11.145	85	20049	10.70	ug/L		91
71) 2-Chlorotoluene	11.211	126	21062	11.27	ug/L		88
72) 1,3,5-Trimethylbenzene	11.236	105	70618	11.08	ug/L		97
73) 1,2,3-Trichloropropane	11.254	110	9348	9.99	ug/L		95
74) t-1,4-Dichloro-2-butene	11.285	53	7647	12.44	ug/L	#	73
75) 4-Chlorotoluene	11.339	91	64861	11.59	ug/L		93
76) tert-Butylbenzene	11.485	91	40180	11.70	ug/L		90
77) 1,2,4-Trimethylbenzene	11.540	105	71009	11.35	ug/L		94
78) sec-Butylbenzene	11.625	105	86944	11.01	ug/L		99
79) 4-Isopropyltoluene	11.729	119	69238	11.50	ug/L		98
80) 1,3-Dichlorobenzene	11.802	146	40809	11.45	ug/L		97
81) 1,4-Dichlorobenzene	11.869	146	41265	9.85	ug/L		93
82) n-Butylbenzene	12.051	91	63502	11.68	ug/L		98
83) 1,2-Dichlorobenzene	12.185	146	39721	11.67	ug/L		98
84) 1,2-Dibromo-3-Chloropr...	12.805	157	5649	9.66	ug/L		81
85) Hexachlorobutadiene	13.310	223	5826	13.61	ug/L		92
86) 1,2,4-Trichlorobenzene	13.353	180	22943	13.26	ug/L		97
87) Naphthalene	13.633	128	72663	12.93	ug/L		96
88) 1,2,3-Trichlorobenzene	13.791	180	21767	12.28	ug/L		94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062026.D
Acq On : 20 Jun 2019 8:58 pm
Operator : MM
Sample : 9F20044-CAL7
Misc : 1X 5mL 10/20PPB VOCR+OXY
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 09:46:03 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 08:57:41 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062027.D
Acq On : 20 Jun 2019 9:25 pm
Operator : MM
Sample : 9F20044-CAL8
Misc : 1X 5mL 20/40PPB VOCR+OXY
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 09:46:06 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 08:57:41 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.223	168	211811	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	9.916	117	321290	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	11.856	152	153422	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	5.718	111	114050	45.73	ug/L		0.00
39) 1,4-Difluorobenzene (S)	6.789	114	352468	46.42	ug/L		0.00
48) Toluene-d8 (S)	8.304	98	416334	48.82	ug/L		0.00
67) 4-Bromofluorobenzene (S)	10.980	174	126396	53.93	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.679	85	45341	18.66	ug/L		98
3) Chloromethane	1.898	50	53847	14.84	ug/L		96
4) Vinyl Chloride	2.001	62	51551	16.70	ug/L		96
5) Bromomethane	2.366	96	25381	15.87	ug/L		100
6) Chloroethane	2.500	64	17079	18.35	ug/L		84
7) Trichlorofluoromethane	2.664	101	58229	16.32	ug/L		97
8) Ethanol	3.236	45	64932	No Calib			
9) 1,1-Dichloroethene	3.236	61	60935	19.90	ug/L		98
10) Carbon Disulfide	3.254	76	106077	20.22	ug/L		98
11) Freon 113	3.291	101	38212	17.85	ug/L		99
12) Iodomethane	3.394	142	14419	22.58	ug/L		93
13) Acrolein	3.625	56	11354	19.22	ug/L		75
14) Methylene Chloride	3.875	84	43827	16.37	ug/L		97
15) Acetone	3.942	43	38901	30.80	ug/L		97
16) t-1,2-Dichloroethene	4.045	61	57700	20.14	ug/L		98
17) n-Hexane	4.124	86	8288	21.48	ug/L	#	78
18) Methyl-tert-butyl-ether	4.173	73	139596	28.12	ug/L		92
19) tert-Butanol (TBA)	4.295	59	596009	No Calib			
20) Diisopropyl ether (DIPE)	4.568	45	34910	No Calib			
21) 1,1-Dichloroethane	4.690	63	75912	19.65	ug/L		97
22) Acrylonitrile	4.757	53	24079	17.86	ug/L		97
23) Ethyl-tert-butyl ether...	4.946	59	35210	No Calib			
24) Vinyl Acetate	4.964	43	90782	47.54	ug/L		97
25) c-1,2-Dichloroethene	5.250	61	61245	21.46	ug/L		97
26) 2,2-Dichloropropane	5.359	77	58610	34.87	ug/L		91
27) Bromochloromethane	5.450	130	29415	19.99	ug/L		87
28) Chloroform	5.530	83	77689	19.02	ug/L		97
29) Carbon Tetrachloride	5.663	117	46960	19.33	ug/L		93
30) Tetrahydrofuran	5.706	42	22966	19.38	ug/L		89
31) 1,1,1-Trichloroethane	5.736	97	62914	21.69	ug/L		96
33) 1,1-Dichloropropene	5.864	75	60592	23.11	ug/L		96
34) 2-Butanone (MEK)	5.858	43	68176	38.39	ug/L		96
35) Benzene	6.126	78	177855	20.48	ug/L		99
36) tert-Amyl methyl ether...	6.253	73	33066	No Calib			
37) 1,2-Dichloroethane (EDC)	6.345	62	59444	19.69	ug/L		92
38) iso-Butyl Alcohol	6.375	43	87748	427.82	ug/L		91
40) Trichloroethene (TCE)	6.746	130	44514	18.88	ug/L		97
41) Tert-Amyl-Ethyl-Ether ...	7.002	59	26731	No Calib			
42) Dibromomethane	7.203	93	29571	19.62	ug/L		94
43) 1,2-Dichloropropane	7.318	63	46799	19.68	ug/L		93
44) Bromodichloromethane	7.385	83	53614	19.60	ug/L		93
46) 2-Chloroethyl Vinyl Ether	8.030	63	36879	40.91	ug/L	#	100
47) c-1,3-Dichloropropene	8.097	75	67880	25.60	ug/L		91

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062027.D
Acq On : 20 Jun 2019 9:25 pm
Operator : MM
Sample : 9F20044-CAL8
Misc : 1X 5mL 20/40PPB VOCR+OXY
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 09:46:06 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 08:57:41 2019
Response via : Initial Calibration

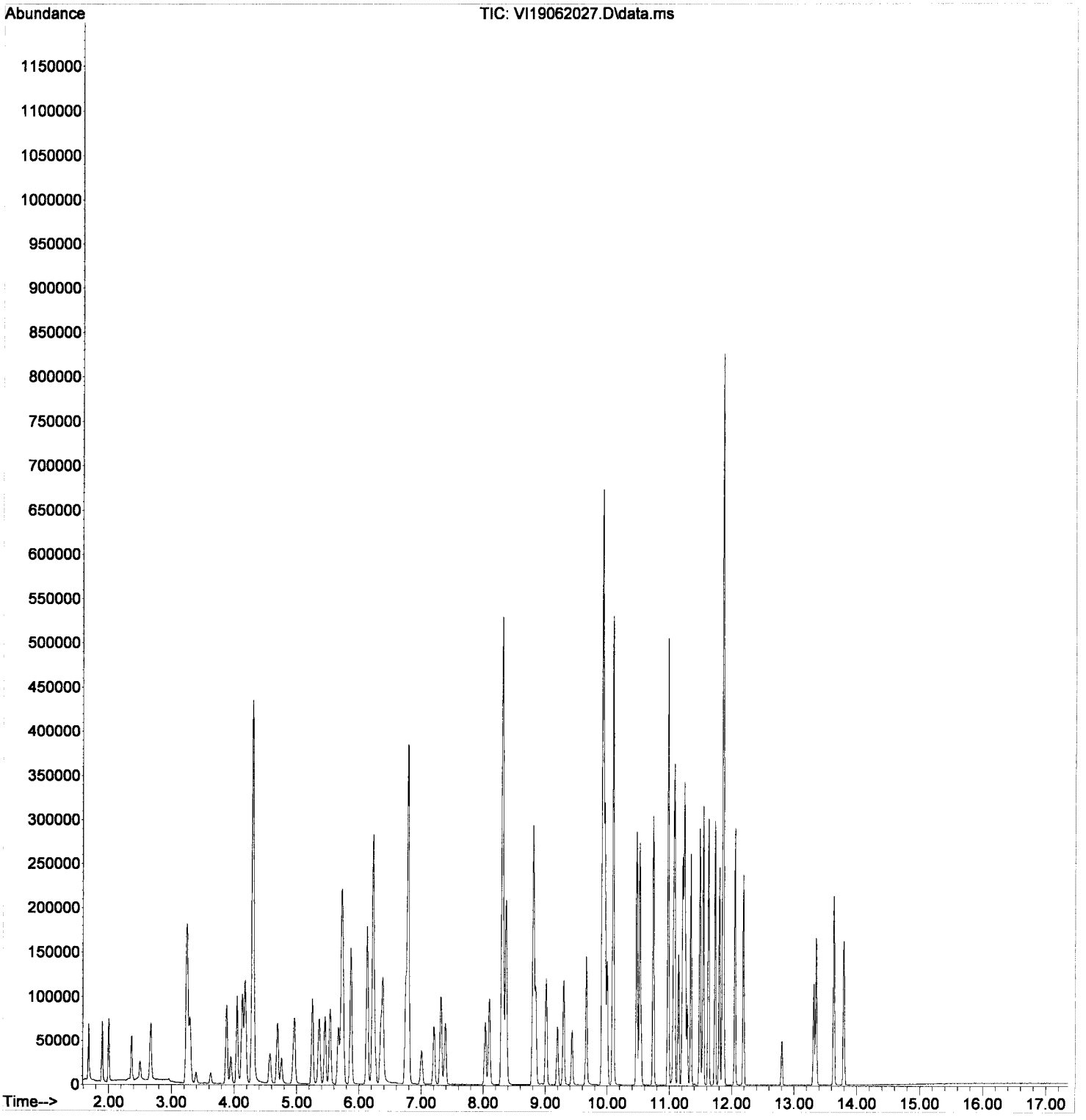
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
49) Toluene	8.364	91	182138	19.97	ug/L	99
50) Tetrachloroethene (PCE)	8.803	166	43326	20.93	ug/L	92
51) 4-Methyl-2-Pentanone (...	8.803	43	131182	42.05	ug/L	100
52) t-1,3-Dichloropropene	8.839	75	62988	25.61	ug/L	95
53) 1,1,2-Trichloroethane	9.009	97	42325	19.69	ug/L	96
54) Dibromochloromethane	9.192	129	38368	19.60	ug/L	99
55) 1,3-Dichloropropane	9.295	76	73700	21.61	ug/L	94
56) 1,2-Dibromoethane (EDB)	9.429	107	45760	22.46	ug/L	96
57) 2-Hexanone	9.660	43	95510	38.33	ug/L	93
58) Chlorobenzene	9.934	112	114554	18.82	ug/L	96
59) Ethylbenzene	9.958	91	199043	21.55	ug/L	99
60) 1,1,1,2-Tetrachloroethane	9.995	131	36071	19.98	ug/L	97
61) m,p-Xylenes (2)	10.092	91	297370	39.23	ug/L	99
62) o-Xylene	10.469	91	154063	21.67	ug/L	97
63) Styrene	10.518	104	120508	20.54	ug/L	96
64) Bromoform	10.542	173	24635	18.47	ug/L	92
65) Isopropylbenzene	10.737	105	183642	21.40	ug/L	100
68) Bromobenzene	11.066	156	48339	21.35	ug/L	85
69) n-Propylbenzene	11.078	91	216830	22.29	ug/L	97
70) 1,1,2,2-Tetrachloroethane	11.145	85	40959	20.49	ug/L	93
71) 2-Chlorotoluene	11.212	126	43622	21.88	ug/L	95
72) 1,3,5-Trimethylbenzene	11.236	105	146061	21.02	ug/L	99
73) 1,2,3-Trichloropropane	11.254	110	19069	19.10	ug/L	98
74) t-1,4-Dichloro-2-butene	11.285	53	16429	25.05	ug/L	81
75) 4-Chlorotoluene	11.339	91	134477	22.51	ug/L	93
76) tert-Butylbenzene	11.485	91	83942	22.43	ug/L	93
77) 1,2,4-Trimethylbenzene	11.540	105	147716	21.71	ug/L	95
78) sec-Butylbenzene	11.625	105	180863	21.14	ug/L	99
79) 4-Isopropyltoluene	11.729	119	145889	22.22	ug/L	99
80) 1,3-Dichlorobenzene	11.802	146	84752	22.29	ug/L	98
81) 1,4-Dichlorobenzene	11.869	146	86143	19.26	ug/L	97
82) n-Butylbenzene	12.051	91	134600	22.74	ug/L	98
83) 1,2-Dichlorobenzene	12.185	146	82461	22.70	ug/L	97
84) 1,2-Dibromo-3-Chloropr...	12.805	157	12521	19.32	ug/L	87
85) Hexachlorobutadiene	13.310	223	12574	27.53	ug/L	94
86) 1,2,4-Trichlorobenzene	13.353	180	49011	25.56	ug/L	97
87) Naphthalene	13.633	128	157738	25.13	ug/L	96
88) 1,2,3-Trichlorobenzene	13.791	180	46693	23.80	ug/L	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062027.D
Acq On : 20 Jun 2019 9:25 pm
Operator : MM
Sample : 9F20044-CAL8
Misc : 1X 5mL 20/40PPB VOCR+OXY
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 09:46:06 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 08:57:41 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062028.D
Acq On : 20 Jun 2019 9:52 pm
Operator : MM
Sample : 9F20044-CAL9
Misc : 1X 5mL 50/100PPB VOCR+OXY
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 09:46:09 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 08:57:41 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.223	168	203359	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	9.916	117	308920	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	11.856	152	150676	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	5.718	111	111616	46.61	ug/L		0.00
39) 1,4-Difluorobenzene (S)	6.789	114	340921	46.77	ug/L		0.00
48) Toluene-d8 (S)	8.304	98	405204	49.42	ug/L		0.00
67) 4-Bromofluorobenzene (S)	10.980	174	122539	53.24	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.685	85	120443	51.62	ug/L		99
3) Chloromethane	1.898	50	136445	39.16	ug/L		96
4) Vinyl Chloride	2.001	62	131880	44.49	ug/L		96
5) Bromomethane	2.366	96	58858	38.34	ug/L		97
6) Chloroethane	2.500	64	41565	40.89	ug/L		83
7) Trichlorofluoromethane	2.670	101	147150	42.96	ug/L		97
8) Ethanol	3.236	45	122303	No Calib			
9) 1,1-Dichloroethene	3.242	61	152871	51.99	ug/L		96
10) Carbon Disulfide	3.254	76	265043	52.63	ug/L		99
11) Freon 113	3.291	101	96319	46.86	ug/L		99
12) Iodomethane	3.394	142	59951	68.22	ug/L		90
13) Acrolein	3.625	56	27909	49.20	ug/L		74
14) Methylene Chloride	3.881	84	106690	41.50	ug/L		95
15) Acetone	3.948	43	98222	80.99	ug/L		98
16) t-1,2-Dichloroethene	4.045	61	146773	53.35	ug/L		97
17) n-Hexane	4.124	86	21296	54.03	ug/L	#	75
18) Methyl-tert-butyl-ether	4.173	73	355406	74.56	ug/L		91
19) tert-Butanol (TBA)	4.295	59	1112985	No Calib			
20) Diisopropyl ether (DIPE)	4.568	45	72280	No Calib			
21) 1,1-Dichloroethane	4.690	63	192771	51.96	ug/L		96
22) Acrylonitrile	4.751	53	62678	48.42	ug/L		98
23) Ethyl-tert-butyl ether...	4.946	59	70328	No Calib			
24) Vinyl Acetate	4.964	43	245025	119.65	ug/L		97
25) c-1,2-Dichloroethene	5.250	61	155174	56.63	ug/L		96
26) 2,2-Dichloropropane	5.359	77	148380	91.94	ug/L		94
27) Bromochloromethane	5.450	130	76222	53.96	ug/L		86
28) Chloroform	5.536	83	197721	50.42	ug/L		98
29) Carbon Tetrachloride	5.669	117	124688	53.46	ug/L		94
30) Tetrahydrofuran	5.700	42	59864	52.62	ug/L		88
31) 1,1,1-Trichloroethane	5.736	97	159643	57.33	ug/L		98
33) 1,1-Dichloropropene	5.870	75	151196	60.08	ug/L		96
34) 2-Butanone (MEK)	5.858	43	172204	101.00	ug/L		98
35) Benzene	6.126	78	445865	53.47	ug/L		98
36) tert-Amyl methyl ether...	6.253	73	66498	No Calib			
37) 1,2-Dichloroethane (EDC)	6.345	62	151724	52.33	ug/L		94
38) iso-Butyl Alcohol	6.375	43	234023	1188.42	ug/L		91
40) Trichloroethene (TCE)	6.746	130	110584	48.84	ug/L		95
41) Tert-Amyl-Ethyl-Ether ...	7.008	59	50305	No Calib			
42) Dibromomethane	7.203	93	76074	52.57	ug/L		91
43) 1,2-Dichloropropane	7.312	63	117196	51.32	ug/L		91
44) Bromodichloromethane	7.385	83	141449	53.85	ug/L		93
46) 2-Chloroethyl Vinyl Ether	8.030	63	90290	95.59	ug/L	#	100
47) c-1,3-Dichloropropene	8.097	75	179241	58.16	ug/L		91

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062028.D
Acq On : 20 Jun 2019 9:52 pm
Operator : MM
Sample : 9F20044-CAL9
Misc : 1X 5mL 50/100PPB VOCR+OXY
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 09:46:09 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 08:57:41 2019
Response via : Initial Calibration

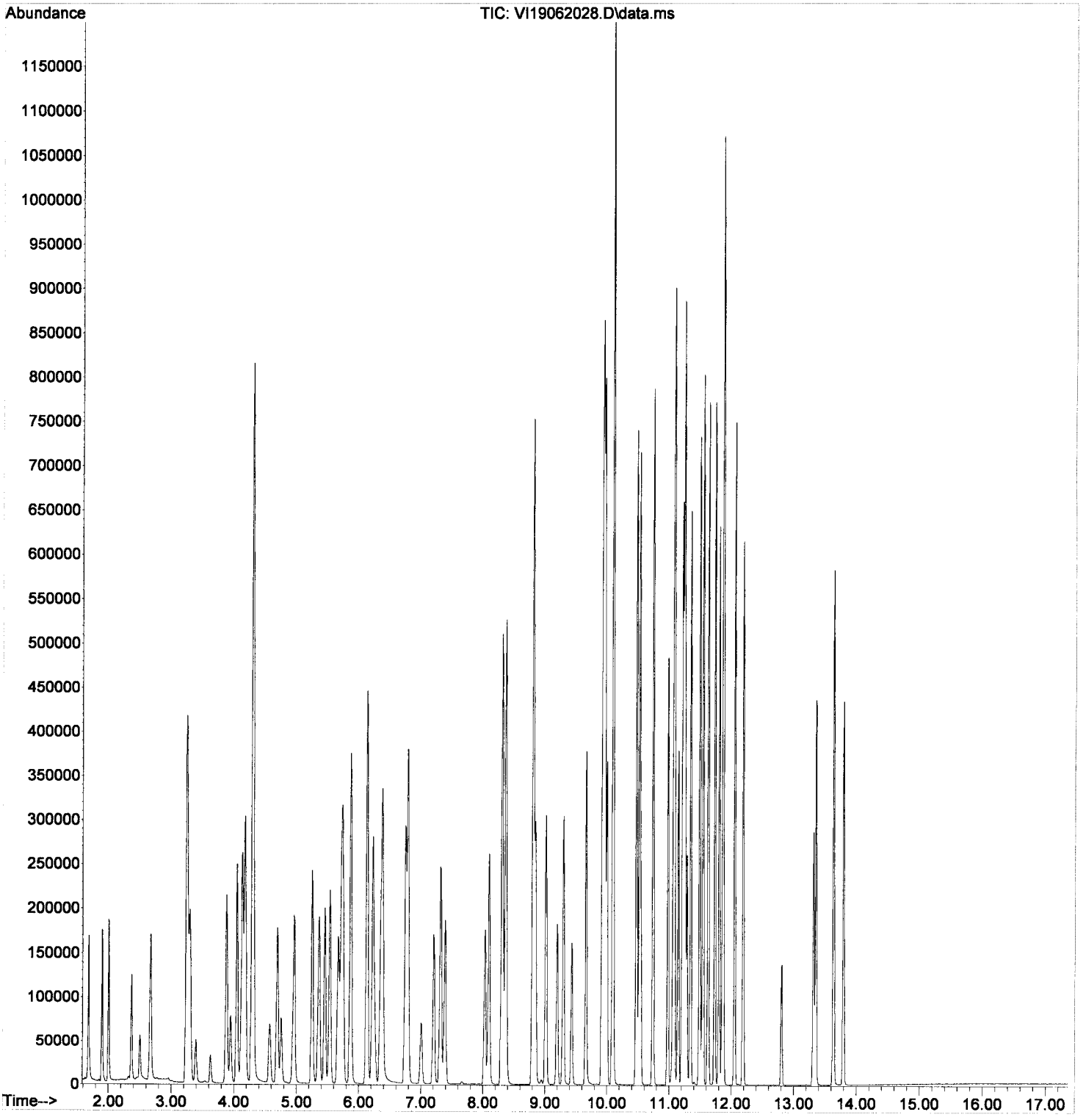
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
49) Toluene	8.364	91	453767	51.75	ug/L	99
50) Tetrachloroethene (PCE)	8.802	166	106928	53.72	ug/L	89
51) 4-Methyl-2-Pentanone (...	8.802	43	334688	111.58	ug/L	99
52) t-1,3-Dichloropropene	8.845	75	168385	59.97	ug/L	97
53) 1,1,2-Trichloroethane	9.009	97	107199	51.87	ug/L	97
54) Dibromochloromethane	9.192	129	105586	56.11	ug/L	97
55) 1,3-Dichloropropane	9.295	76	188838	57.58	ug/L	97
56) 1,2-Dibromoethane (EDB)	9.429	107	117678	60.07	ug/L	97
57) 2-Hexanone	9.660	43	246411	101.13	ug/L	93
58) Chlorobenzene	9.934	112	287748	49.18	ug/L	95
59) Ethylbenzene	9.958	91	500499	56.36	ug/L	99
60) 1,1,1,2-Tetrachloroethane	9.995	131	95349	54.92	ug/L	97
61) m,p-Xylenes (2)	10.092	91	761093	102.80	ug/L	98
62) o-Xylene	10.469	91	393871	55.95	ug/L	98
63) Styrene	10.518	104	310680	53.57	ug/L	94
64) Bromoform	10.542	173	71192	45.80	ug/L	97
65) Isopropylbenzene	10.737	105	464969	54.41	ug/L	100
68) Bromobenzene	11.066	156	122510	55.10	ug/L	85
69) n-Propylbenzene	11.078	91	552123	57.78	ug/L	98
70) 1,1,2,2-Tetrachloroethane	11.145	85	106308	54.14	ug/L	94
71) 2-Chlorotoluene	11.212	126	110540	56.45	ug/L	97
72) 1,3,5-Trimethylbenzene	11.236	105	374460	53.34	ug/L	99
73) 1,2,3-Trichloropropane	11.254	110	48655	49.63	ug/L	98
74) t-1,4-Dichloro-2-butene	11.285	53	44053	68.38	ug/L	82
75) 4-Chlorotoluene	11.339	91	342004	58.30	ug/L	93
76) tert-Butylbenzene	11.485	91	215295	56.88	ug/L	90
77) 1,2,4-Trimethylbenzene	11.540	105	378562	54.99	ug/L	95
78) sec-Butylbenzene	11.625	105	462445	53.81	ug/L	98
79) 4-Isopropyltoluene	11.729	119	381484	56.92	ug/L	99
80) 1,3-Dichlorobenzene	11.802	146	214935	57.55	ug/L	98
81) 1,4-Dichlorobenzene	11.869	146	219818	50.04	ug/L	96
82) n-Butylbenzene	12.051	91	347856	57.63	ug/L	97
83) 1,2-Dichlorobenzene	12.185	146	212354	59.51	ug/L	98
84) 1,2-Dibromo-3-Chloropr...	12.805	157	35049	52.88	ug/L	88
85) Hexachlorobutadiene	13.310	223	31871	71.05	ug/L	95
86) 1,2,4-Trichlorobenzene	13.353	180	128307	64.38	ug/L	96
87) Naphthalene	13.633	128	419902	62.94	ug/L	96
88) 1,2,3-Trichlorobenzene	13.791	180	121910	60.36	ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062028.D
Acq On : 20 Jun 2019 9:52 pm
Operator : MM
Sample : 9F20044-CAL9
Misc : 1X 5mL 50/100PPB VOCR+OXY
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 09:46:09 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 08:57:41 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062029.D
Acq On : 20 Jun 2019 10:19 pm
Operator : MM
Sample : 9F20044-IBL2
Misc : 1X 5mL DI
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 10:40:19 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration

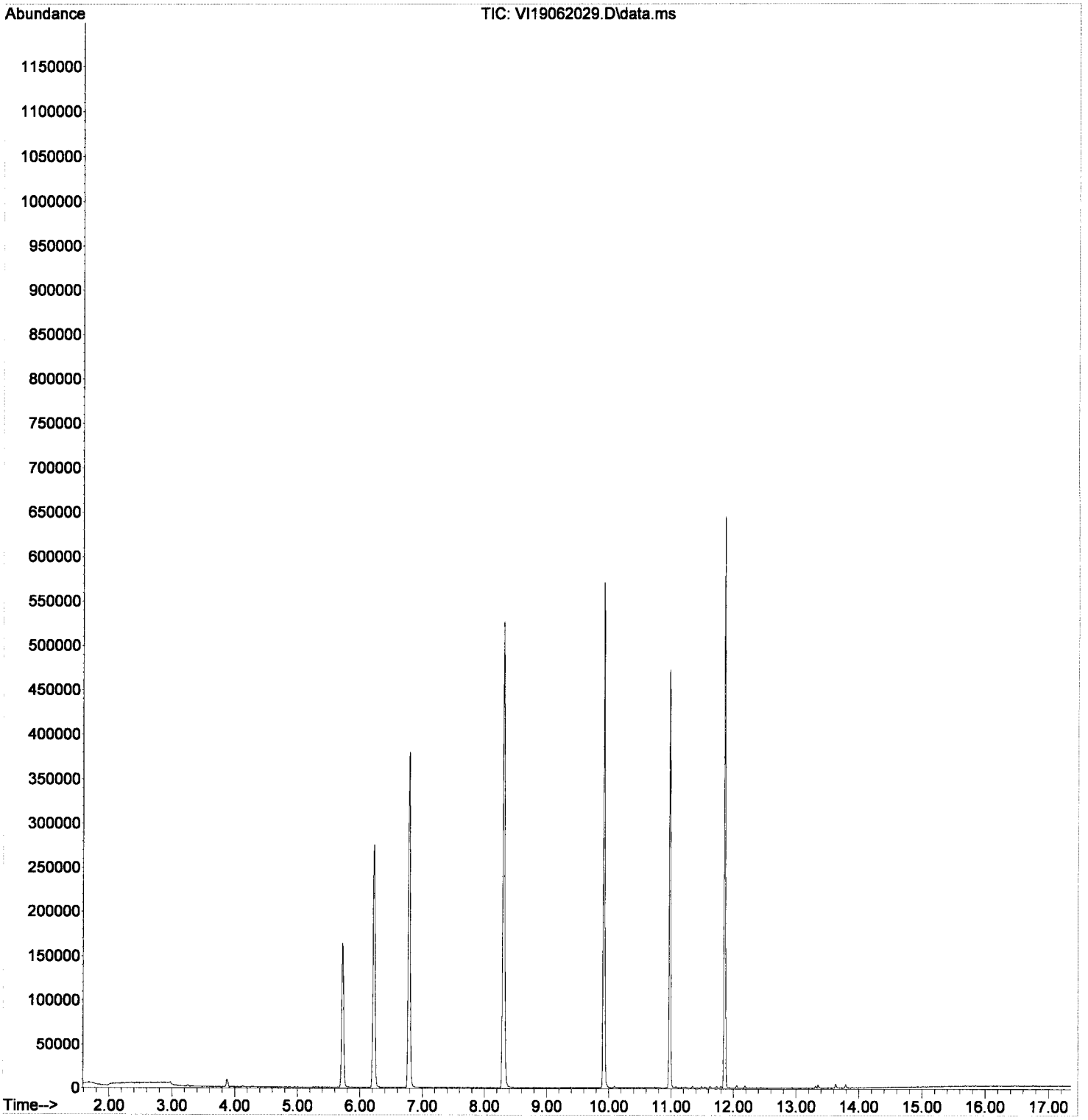
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.223	168	216079	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	9.916	117	318201	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	11.856	152	140956	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	5.718	111	113957	48.92	ug/L		0.00
39) 1,4-Difluorobenzene (S)	6.789	114	358531	49.85	ug/L		0.00
48) Toluene-d8 (S)	8.304	98	417933	50.27	ug/L		0.00
67) 4-Bromofluorobenzene (S)	10.980	174	120696	51.68	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.679	85	241	0.11	ug/L	#	49
3) Chloromethane	1.891	50	540	0.19	ug/L	#	47
5) Bromomethane	2.366	96	393	0.30	ug/L		71
10) Carbon Disulfide	3.254	76	2053	0.39	ug/L		91
14) Methylene Chloride	3.875	84	4452	0.18	ug/L		96
15) Acetone	3.960	43	974	0.93	ug/L	#	44
16) t-1,2-Dichloroethene	4.045	61	289	0.10	ug/L	#	55
19) tert-Butanol (TBA)	4.301	59	353	0.79	ug/L	#	16
50) Tetrachloroethene (PCE)	8.808	166	228	0.11	ug/L	#	25
58) Chlorobenzene	9.934	112	442	0.08	ug/L	#	1
59) Ethylbenzene	9.958	91	823	0.09	ug/L		89
61) m,p-Xylenes (2)	10.098	91	1374	0.19	ug/L		95
65) Isopropylbenzene	10.743	105	718	0.08	ug/L		82
69) n-Propylbenzene	11.078	91	1498	0.16	ug/L		91
72) 1,3,5-Trimethylbenzene	11.236	105	742	0.11	ug/L		94
75) 4-Chlorotoluene	11.345	91	814	0.14	ug/L		89
76) tert-Butylbenzene	11.485	91	422	0.11	ug/L		97
77) 1,2,4-Trimethylbenzene	11.546	105	886	0.14	ug/L		93
78) sec-Butylbenzene	11.625	105	1404	0.17	ug/L		94
79) 4-Isopropyltoluene	11.729	119	1296	0.20	ug/L		85
80) 1,3-Dichlorobenzene	11.802	146	711	0.19	ug/L		95
81) 1,4-Dichlorobenzene	11.868	146	849	0.22	ug/L	#	18
82) n-Butylbenzene	12.051	91	1592	0.27	ug/L		96
83) 1,2-Dichlorobenzene	12.191	146	443	0.12	ug/L		96
85) Hexachlorobutadiene	13.316	223	457	0.87	ug/L	#	80
86) 1,2,4-Trichlorobenzene	13.353	180	1295	0.61	ug/L		96
87) Naphthalene	13.633	128	4300	0.62	ug/L		97
88) 1,2,3-Trichlorobenzene	13.791	180	1494	0.73	ug/L		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062029.D
Acq On : 20 Jun 2019 10:19 pm
Operator : MM
Sample : 9F20044-IBL2
Misc : 1X 5mL DI
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 10:40:19 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062030.D
Acq On : 20 Jun 2019 10:46 pm
Operator : MM
Sample : 9F20044-CALA
Misc : 1X 5mL 100/200PPB VOCR+OXY
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 09:46:12 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 08:57:41 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.223	168	215096	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	9.916	117	326979	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	11.856	152	158080	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	5.724	111	116734	46.09	ug/L		0.00
39) 1,4-Difluorobenzene (S)	6.789	114	358617	46.51	ug/L		0.00
48) Toluene-d8 (S)	8.304	98	420397	48.44	ug/L		0.00
67) 4-Bromofluorobenzene (S)	10.980	174	127873	52.96	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.691	85	242339	98.19	ug/L		99
3) Chloromethane	1.904	50	268247	72.79	ug/L		95
4) Vinyl Chloride	2.007	62	267614	85.36	ug/L		97
5) Bromomethane	2.372	96	114028	70.22	ug/L		97
6) Chloroethane	2.506	64	41076	38.76	ug/L		87
7) Trichlorofluoromethane	2.670	101	296413	81.81	ug/L		96
8) Ethanol	3.248	45	245570	No Calib			
9) 1,1-Dichloroethene	3.242	61	298169	95.88	ug/L		97
10) Carbon Disulfide	3.260	76	511828	96.09	ug/L		99
11) Freon 113	3.297	101	185413	85.28	ug/L		99
12) Iodomethane	3.400	142	141825	124.21	ug/L		89
13) Acrolein	3.631	56	59402	99.01	ug/L		71
14) Methylene Chloride	3.881	84	204285	75.12	ug/L		95
15) Acetone	3.954	43	185269	144.43	ug/L		96
16) t-1,2-Dichloroethene	4.051	61	283049	97.27	ug/L		96
17) n-Hexane	4.130	86	41081	95.20	ug/L	#	72
18) Methyl-tert-butyl-ether	4.179	73	687445	136.36	ug/L		93
19) tert-Butanol (TBA)	4.301	59	2207246	No Calib			
20) Diisopropyl ether (DIPE)	4.574	45	145556	No Calib			
21) 1,1-Dichloroethane	4.696	63	370610	94.45	ug/L		96
22) Acrylonitrile	4.757	53	119204	87.06	ug/L		98
23) Ethyl-tert-butyl ether...	4.945	59	141315	No Calib			
24) Vinyl Acetate	4.964	43	502043	209.94	ug/L		97
25) c-1,2-Dichloroethene	5.250	61	300456	103.66	ug/L		97
26) 2,2-Dichloropropane	5.359	77	285471	167.24	ug/L		92
27) Bromochloromethane	5.456	130	140204	93.83	ug/L		91
28) Chloroform	5.536	83	381891	92.07	ug/L		97
29) Carbon Tetrachloride	5.669	117	251247	101.85	ug/L		95
30) Tetrahydrofuran	5.706	42	112665	93.63	ug/L		88
31) 1,1,1-Trichloroethane	5.742	97	311653	105.81	ug/L		96
33) 1,1-Dichloropropene	5.870	75	293441	110.23	ug/L		97
34) 2-Butanone (MEK)	5.864	43	323609	179.44	ug/L		100
35) Benzene	6.132	78	869915	98.63	ug/L		98
36) tert-Amyl methyl ether...	6.260	73	133827	No Calib			
37) 1,2-Dichloroethane (EDC)	6.351	62	291619	95.10	ug/L		93
38) iso-Butyl Alcohol	6.381	43	428089	2055.31	ug/L		91
40) Trichloroethene (TCE)	6.752	130	217794	90.95	ug/L		97
41) Tert-Amyl-Ethyl-Ether ...	7.008	59	105118	No Calib			
42) Dibromomethane	7.209	93	147484	96.36	ug/L		94
43) 1,2-Dichloropropane	7.318	63	229097	94.85	ug/L		91
44) Bromodichloromethane	7.385	83	279539	100.61	ug/L		95
46) 2-Chloroethyl Vinyl Ether	8.030	63	194477	177.87	ug/L	#	100
47) c-1,3-Dichloropropene	8.097	75	350611	91.47	ug/L		91

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062030.D
Acq On : 20 Jun 2019 10:46 pm
Operator : MM
Sample : 9F20044-CALA
Misc : 1X 5mL 100/200PPB VOCR+OXY
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 09:46:12 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 08:57:41 2019
Response via : Initial Calibration

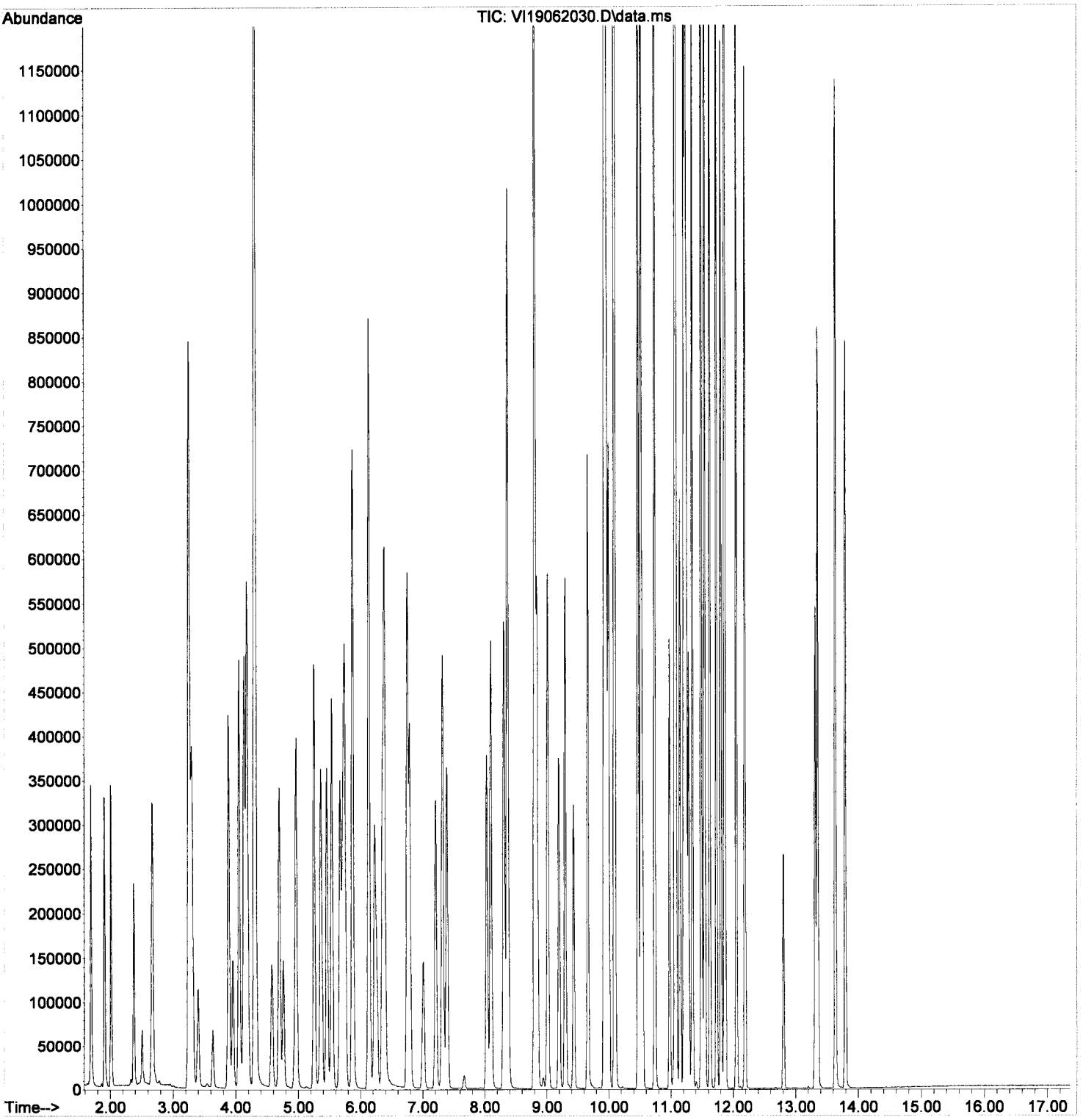
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
49) Toluene	8.364	91	880744	94.91	ug/L	99
50) Tetrachloroethene (PCE)	8.802	166	211071	100.13	ug/L	88
51) 4-Methyl-2-Pentanone (...	8.802	43	616521	194.19	ug/L	98
52) t-1,3-Dichloropropene	8.845	75	328804	95.43	ug/L	98
53) 1,1,2-Trichloroethane	9.015	97	208022	95.10	ug/L	94
54) Dibromochloromethane	9.192	129	215589	108.24	ug/L	98
55) 1,3-Dichloropropane	9.295	76	360265	103.79	ug/L	96
56) 1,2-Dibromoethane (EDB)	9.429	107	227284	109.61	ug/L	95
57) 2-Hexanone	9.660	43	451887	176.58	ug/L	93
58) Chlorobenzene	9.934	112	563709	91.02	ug/L	95
59) Ethylbenzene	9.958	91	976571	103.89	ug/L	99
60) 1,1,1,2-Tetrachloroethane	9.995	131	191370	104.13	ug/L	96
61) m,p-Xylenes (2)	10.092	91	1487683	186.69	ug/L	99
62) o-Xylene	10.469	91	764933	99.43	ug/L	98
63) Styrene	10.518	104	603050	95.73	ug/L	95
64) Bromoform	10.542	173	146715	75.14	ug/L	97
65) Isopropylbenzene	10.737	105	915044	97.94	ug/L	100
68) Bromobenzene	11.066	156	235375	100.90	ug/L	86
69) n-Propylbenzene	11.078	91	1076928	107.43	ug/L	98
70) 1,1,2,2-Tetrachloroethane	11.145	85	191420	92.93	ug/L	97
71) 2-Chlorotoluene	11.212	126	215672	104.98	ug/L	97
72) 1,3,5-Trimethylbenzene	11.236	105	734923	97.24	ug/L	99
73) 1,2,3-Trichloropropane	11.254	110	91426	88.90	ug/L	93
74) t-1,4-Dichloro-2-butene	11.285	53	81928	121.22	ug/L	89
75) 4-Chlorotoluene	11.339	91	657809	106.88	ug/L	93
76) tert-Butylbenzene	11.485	91	418585	102.51	ug/L	92
77) 1,2,4-Trimethylbenzene	11.540	105	737015	98.90	ug/L	96
78) sec-Butylbenzene	11.625	105	901848	97.74	ug/L	99
79) 4-Isopropyltoluene	11.729	119	747978	102.10	ug/L	99
80) 1,3-Dichlorobenzene	11.802	146	416625	106.33	ug/L	99
81) 1,4-Dichlorobenzene	11.869	146	424379	92.09	ug/L	97
82) n-Butylbenzene	12.051	91	684028	103.64	ug/L	97
83) 1,2-Dichlorobenzene	12.185	146	396257	105.85	ug/L	97
84) 1,2-Dibromo-3-Chloropr...	12.805	157	67160	93.72	ug/L	89
85) Hexachlorobutadiene	13.310	223	61323	130.30	ug/L	95
86) 1,2,4-Trichlorobenzene	13.347	180	252382	114.27	ug/L	95
87) Naphthalene	13.633	128	840999	110.90	ug/L	97
88) 1,2,3-Trichlorobenzene	13.791	180	240292	108.60	ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062030.D
Acq On : 20 Jun 2019 10:46 pm
Operator : MM
Sample : 9F20044-CALA
Misc : 1X 5mL 100/200PPB VOCR+OXY
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 09:46:12 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 08:57:41 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062031.D
Acq On : 20 Jun 2019 11:13 pm
Operator : MM
Sample : 9F20044-IBL3
Misc : 1X 5mL DI
ALS Vial : 15 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 10:40:22 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.223	168	206174	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	9.916	117	306015	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	11.856	152	138257	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	5.724	111	110229	49.60	ug/L		0.00
39) 1,4-Difluorobenzene (S)	6.789	114	343935	50.12	ug/L		0.00
48) Toluene-d8 (S)	8.304	98	398633	49.86	ug/L		0.00
67) 4-Bromofluorobenzene (S)	10.980	174	117487	51.29	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.691	85	474	0.22	ug/L		88
3) Chloromethane	1.904	50	777	0.29	ug/L		84
4) Vinyl Chloride	2.001	62	315	0.13	ug/L	#	50
5) Bromomethane	2.366	96	411	0.32	ug/L	#	63
7) Trichlorofluoromethane	2.676	101	330	0.12	ug/L	#	27
9) 1,1-Dichloroethene	3.242	61	364	0.13	ug/L	#	74
10) Carbon Disulfide	3.260	76	3549	0.71	ug/L		94
11) Freon 113	3.303	101	239	0.13	ug/L	#	67
12) Iodomethane	3.394	142	276	2.90	ug/L	#	47
14) Methylene Chloride	3.887	84	4069	0.09	ug/L		90
15) Acetone	3.954	43	1077	1.07	ug/L	#	44
16) t-1,2-Dichloroethene	4.045	61	759	0.28	ug/L		87
19) tert-Butanol (TBA)	4.307	59	401	0.93	ug/L	#	40
33) 1,1-Dichloropropene	5.876	75	502	0.18	ug/L	#	43
40) Trichloroethene (TCE)	6.752	130	278	0.13	ug/L	#	70
49) Toluene	8.364	91	856	0.10	ug/L		86
50) Tetrachloroethene (PCE)	8.796	166	567	0.29	ug/L		92
57) 2-Hexanone	9.666	43	189	0.08	ug/L	#	35
58) Chlorobenzene	9.934	112	838	0.16	ug/L	#	22
59) Ethylbenzene	9.958	91	1286	0.14	ug/L		90
61) m,p-Xylenes (2)	10.092	91	2389	0.35	ug/L		94
62) o-Xylene	10.475	91	715	0.10	ug/L		88
63) Styrene	10.518	104	579	0.11	ug/L		74
65) Isopropylbenzene	10.737	105	1290	0.16	ug/L		93
68) Bromobenzene	11.066	156	273	0.13	ug/L	#	75
69) n-Propylbenzene	11.084	91	2573	0.27	ug/L		98
71) 2-Chlorotoluene	11.212	126	319	0.17	ug/L	#	74
72) 1,3,5-Trimethylbenzene	11.236	105	1446	0.23	ug/L		93
75) 4-Chlorotoluene	11.339	91	1667	0.28	ug/L		77
76) tert-Butylbenzene	11.485	91	725	0.20	ug/L		85
77) 1,2,4-Trimethylbenzene	11.546	105	1538	0.24	ug/L		79
78) sec-Butylbenzene	11.625	105	2528	0.32	ug/L		97
79) 4-Isopropyltoluene	11.729	119	1962	0.32	ug/L		98
80) 1,3-Dichlorobenzene	11.802	146	1227	0.33	ug/L		94
81) 1,4-Dichlorobenzene	11.869	146	1446	0.38	ug/L	#	48
82) n-Butylbenzene	12.051	91	2867	0.50	ug/L		91
83) 1,2-Dichlorobenzene	12.185	146	897	0.25	ug/L		82
85) Hexachlorobutadiene	13.310	223	768	1.48	ug/L		83
86) 1,2,4-Trichlorobenzene	13.353	180	2437	1.18	ug/L		87
87) Naphthalene	13.633	128	7063	1.05	ug/L		97
88) 1,2,3-Trichlorobenzene	13.791	180	2822	1.41	ug/L		93

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062031.D
Acq On : 20 Jun 2019 11:13 pm
Operator : MM
Sample : 9F20044-IBL3
Misc : 1X 5mL DI
ALS Vial : 15 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 10:40:22 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration

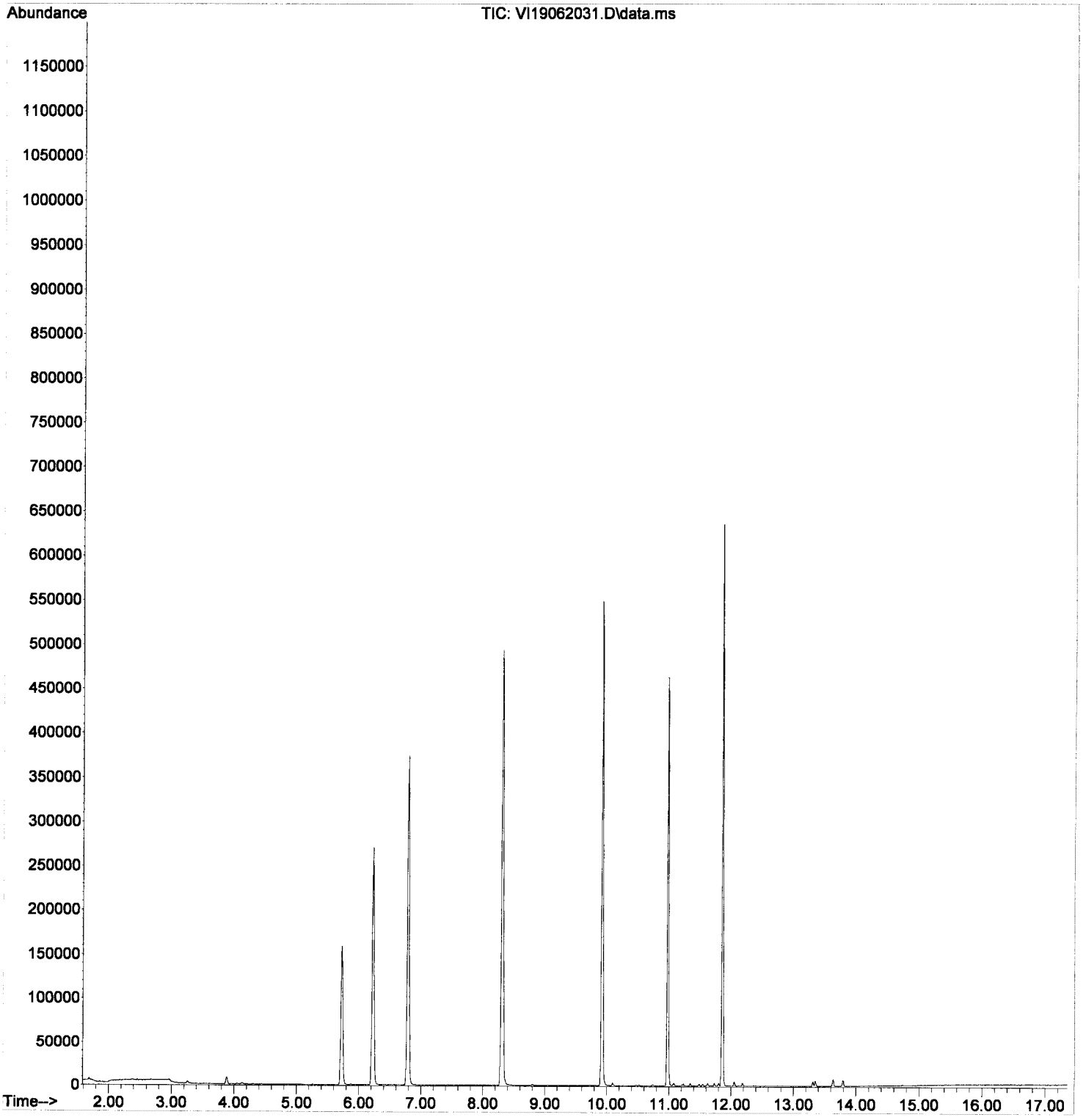
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062031.D
Acq On : 20 Jun 2019 11:13 pm
Operator : MM
Sample : 9F20044-IBL3
Misc : 1X 5mL DI
ALS Vial : 15 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 10:40:22 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062032.D
Acq On : 20 Jun 2019 11:40 pm
Operator : MM
Sample : 9F20044-CALB
Misc : 1X 5mL 200/400PPB VOCR
ALS Vial : 16 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 09:46:15 2019
Quant Method : C:\msdchem\1\methods\~~VI190621W+~~.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 08:57:41 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.223	168	204201	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	9.916	117	310773	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	11.856	152	147969	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	5.718	111	112820	46.92	ug/L		0.00
39) 1,4-Difluorobenzene (S)	6.789	114	342426	46.78	ug/L		0.00
48) Toluene-d8 (S)	8.303	98	405261	49.13	ug/L		0.00
67) 4-Bromofluorobenzene (S)	10.980	174	118374	52.37	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.678	85	445670	190.22	ug/L		99
3) Chloromethane	1.897	50	500665	143.11	ug/L		96
4) Vinyl Chloride	2.001	62	495944	166.63	ug/L		96
5) Bromomethane	2.366	96	223036	144.68	ug/L		98
6) Chloroethane	2.494	64	72831	62.00	ug/L		86
7) Trichlorofluoromethane	2.658	101	538727	156.62	ug/L		97
8) Ethanol	~~3.248~~	~~45~~	~~3998~~	~~No Calib~~		#	
9) 1,1-Dichloroethene	3.236	61	581132	196.84	ug/L		96
10) Carbon Disulfide	3.254	76	996935	197.14	ug/L		99
11) Freon 113	3.291	101	369170	178.85	ug/L		99
12) Iodomethane	3.388	142	297535	215.41	ug/L		88
13) Acrolein	3.625	56	109382	192.03	ug/L		73
14) Methylene Chloride	3.875	84	395740	153.28	ug/L		93
15) Acetone	3.941	43	359555	295.26	ug/L		97
16) t-1,2-Dichloroethene	4.039	61	550967	199.43	ug/L		98
17) n-Hexane	4.124	86	80961	186.99	ug/L	#	80
18) Methyl-tert-butyl-ether	4.173	73	1335564	279.05	ug/L		93
19) tert-Butanol (TBA)	~~4.306~~	~~59~~	~~1660~~	~~No Calib~~		#	
20) Diisopropyl ether (DIPE)	~~4.568~~	~~45~~	~~1323~~	~~No Calib~~			
21) 1,1-Dichloroethane	4.690	63	726726	195.08	ug/L		97
22) Acrylonitrile	4.751	53	232029	178.51	ug/L		99
23) Ethyl-tert-butyl ether...	~~4.945~~	~~59~~	~~1030~~	~~No Calib~~		#	
24) Vinyl Acetate	4.957	43	884370	343.89	ug/L		97
25) c-1,2-Dichloroethene	5.249	61	588700	213.95	ug/L		95
26) 2,2-Dichloropropane	5.359	77	554747	342.33	ug/L		92
27) Bromochloromethane	5.450	130	252303	177.86	ug/L		89
28) Chloroform	5.529	83	746862	189.66	ug/L		98
29) Carbon Tetrachloride	5.663	117	516185	220.42	ug/L		95
30) Tetrahydrofuran	5.700	42	218470	191.25	ug/L		87
31) 1,1,1-Trichloroethane	5.736	97	617180	220.73	ug/L		96
33) 1,1-Dichloropropene	5.864	75	579299	229.23	ug/L		97
34) 2-Butanone (MEK)	5.858	43	633397	369.95	ug/L		99
35) Benzene	6.125	78	1701439	203.20	ug/L		98
36) tert-Amyl methyl ether...	~~6.253~~	~~73~~	~~785~~	~~No Calib~~		#	
37) 1,2-Dichloroethane (EDC)	6.344	62	569728	195.71	ug/L		93
38) iso-Butyl Alcohol	6.381	43	833289	4214.19	ug/L		90
40) Trichloroethene (TCE)	6.746	130	429061	188.73	ug/L		95
41) Tert-Amyl-Ethyl-Ether ...	~~7.008~~	~~59~~	~~785~~	~~No Calib~~			
42) Dibromomethane	7.202	93	291580	200.66	ug/L		93
43) 1,2-Dichloropropane	7.312	63	449560	196.05	ug/L		92
44) Bromodichloromethane	7.385	83	565142	214.26	ug/L		94
46) 2-Chloroethyl Vinyl Ether	8.030	63	365213	311.17	ug/L	#	100
47) c-1,3-Dichloropropene	8.097	75	697644	151.22	ug/L		90

Quantitation Report (Not Reviewed)

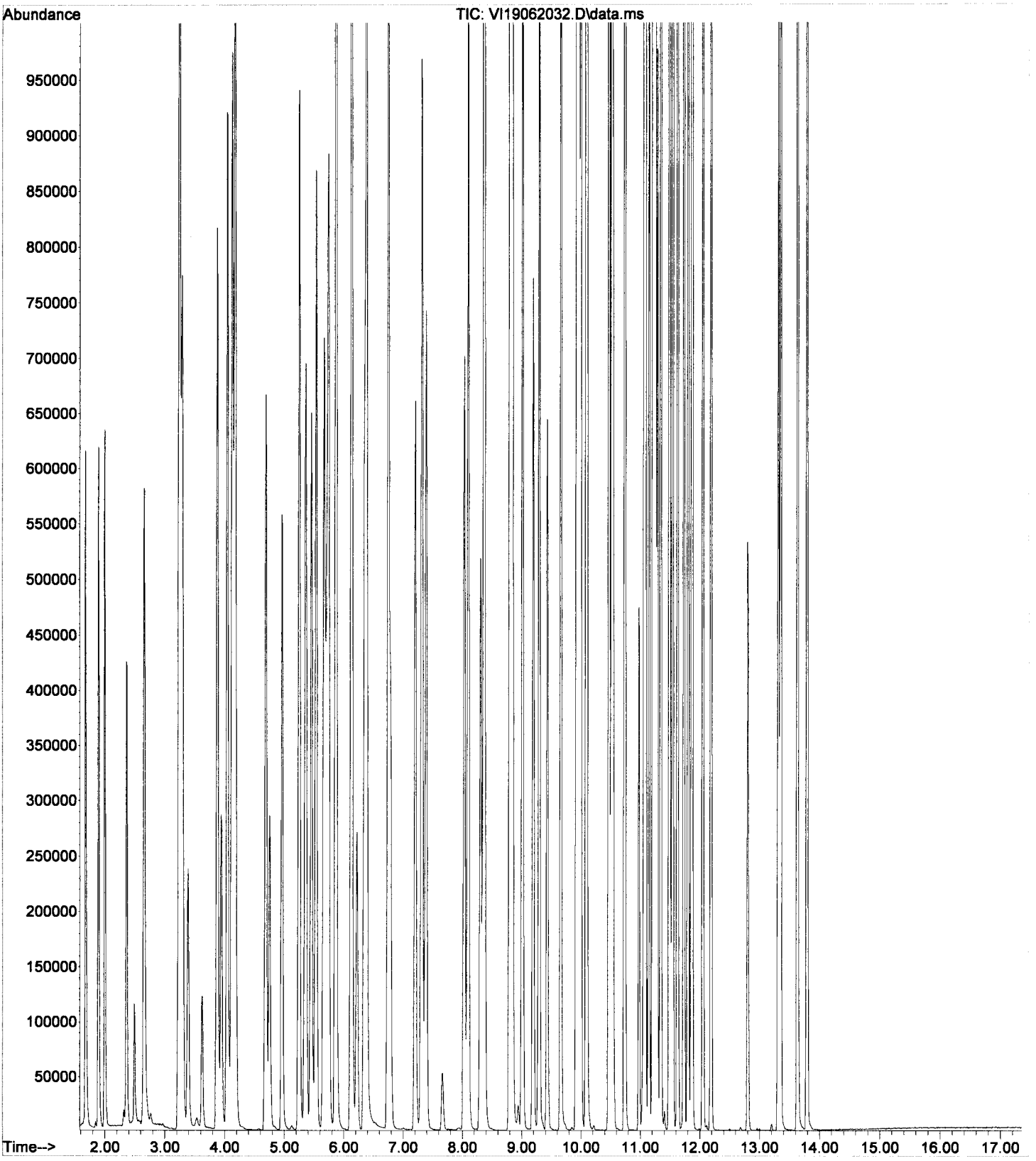
Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062032.D
Acq On : 20 Jun 2019 11:40 pm
Operator : MM
Sample : 9F20044-CALB
Misc : 1X 5mL 200/400PPB VOCR
ALS Vial : 16 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 09:46:15 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 08:57:41 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
49) Toluene	8.364	91	1725149	195.59 ug/L	99
50) Tetrachloroethene (PCE)	8.802	166	419348	209.41 ug/L	88
51) 4-Methyl-2-Pentanone (...	8.802	43	1160712	384.66 ug/L	96
52) t-1,3-Dichloropropene	8.839	75	658211	160.64 ug/L	96
53) 1,1,2-Trichloroethane	9.009	97	402284	193.50 ug/L	96
54) Dibromochloromethane	9.192	129	439963	232.40 ug/L	97
55) 1,3-Dichloropropane	9.295	76	703363	213.20 ug/L	96
56) 1,2-Dibromoethane (EDB)	9.429	107	444681	225.63 ug/L	95
57) 2-Hexanone	9.660	43	863303	367.45 ug/L	92
58) Chlorobenzene	9.934	112	1098798	186.66 ug/L	96
59) Ethylbenzene	9.958	91	1912618	214.08 ug/L	98
60) 1,1,1,2-Tetrachloroethane	9.995	131	384611	220.19 ug/L	96
61) m,p-Xylenes (2)	10.092	91	2895454	369.53 ug/L	99
62) o-Xylene	10.469	91	1481357	190.36 ug/L	99
63) Styrene	10.518	104	1179064	187.17 ug/L	95
64) Bromoform	10.542	173	304762	128.00 ug/L	97
65) Isopropylbenzene	10.737	105	1780791	188.88 ug/L	99
68) Bromobenzene	11.059	156	457253	209.42 ug/L #	79
69) n-Propylbenzene	11.078	91	2100401	223.84 ug/L	99
70) 1,1,2,2-Tetrachloroethane	11.144	85	370226	192.01 ug/L	95
71) 2-Chlorotoluene	11.211	126	417067	216.88 ug/L	98
72) 1,3,5-Trimethylbenzene	11.236	105	1425435	191.81 ug/L	99
73) 1,2,3-Trichloropropane	11.254	110	175270	182.07 ug/L	91
74) t-1,4-Dichloro-2-butene	11.284	53	161119	254.68 ug/L	92
75) 4-Chlorotoluene	11.339	91	1277794	221.80 ug/L	94
76) tert-Butylbenzene	11.485	91	813927	201.72 ug/L	92
77) 1,2,4-Trimethylbenzene	11.540	105	1441707	194.31 ug/L	96
78) sec-Butylbenzene	11.625	105	1744647	193.03 ug/L	100
79) 4-Isopropyltoluene	11.728	119	1456273	196.47 ug/L	98
80) 1,3-Dichlorobenzene	11.801	146	808417	220.42 ug/L	98
81) 1,4-Dichlorobenzene	11.868	146	818316	189.70 ug/L	96
82) n-Butylbenzene	12.051	91	1332336	199.36 ug/L	99
83) 1,2-Dichlorobenzene	12.185	146	774584	221.04 ug/L	98
84) 1,2-Dibromo-3-Chloropr...	12.805	157	136786	191.80 ug/L	91
85) Hexachlorobutadiene	13.310	223	118721	269.50 ug/L	94
86) 1,2,4-Trichlorobenzene	13.347	180	496669	217.50 ug/L	95
87) Naphthalene	13.633	128	1636463	201.95 ug/L	97
88) 1,2,3-Trichlorobenzene	13.791	180	480782	213.84 ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

File :C:\msdchem\1\data\2019-06\9F20044\VI19062032.D
Operator : MM
Acquired : 20 Jun 2019 11:40 pm using AcqMethod VI1611RUN.M
Instrument : VOA-GCMS9
Sample Name: 9F20044-CALB
Misc Info : 1X 5mL 200/400PPB VOCR
Vial Number: 16



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062033.D
Acq On : 21 Jun 2019 12:07 am
Operator : MM
Sample : 9F20044-IBL4
Misc : 1X 5mL DI
ALS Vial : 17 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 10:40:25 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.223	168	207143	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	9.916	117	304398	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	11.856	152	135827	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	5.718	111	110641	49.55	ug/L		0.00
39) 1,4-Difluorobenzene (S)	6.789	114	344343	49.95	ug/L		0.00
48) Toluene-d8 (S)	8.304	98	401688	50.51	ug/L		0.00
67) 4-Bromofluorobenzene (S)	10.980	174	115198	51.19	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.685	85	934	0.43	ug/L		88
3) Chloromethane	1.904	50	791	0.29	ug/L		91
4) Vinyl Chloride	2.001	62	463	0.19	ug/L		83
5) Bromomethane	2.366	96	544	0.43	ug/L	#	48
6) Chloroethane	2.506	64	262	0.30	ug/L	#	36
7) Trichlorofluoromethane	2.670	101	766	0.28	ug/L		88
9) 1,1-Dichloroethene	3.236	61	733	0.26	ug/L		89
10) Carbon Disulfide	3.254	76	7000	1.39	ug/L		96
11) Freon 113	3.291	101	903	0.50	ug/L		89
12) Iodomethane	3.394	142	257	2.88	ug/L	#	47
14) Methylene Chloride	3.875	84	10579	3.43	ug/L		92
15) Acetone	3.954	43	3084	3.06	ug/L		99
16) t-1,2-Dichloroethene	4.045	61	1409	0.52	ug/L		94
25) c-1,2-Dichloroethene	5.250	61	557	0.19	ug/L		94
33) 1,1-Dichloropropene	5.870	75	1087	0.38	ug/L		86
34) 2-Butanone (MEK)	5.870	43	584	0.35	ug/L		52
35) Benzene	6.126	78	979	0.11	ug/L		83
38) iso-Butyl Alcohol	6.381	43	213	1.24	ug/L	#	18
40) Trichloroethene (TCE)	6.746	130	650	0.31	ug/L		94
47) c-1,3-Dichloropropene	8.097	75	302	0.10	ug/L	#	63
49) Toluene	8.364	91	1847	0.21	ug/L		96
50) Tetrachloroethene (PCE)	8.803	166	1037	0.53	ug/L		85
51) 4-Methyl-2-Pentanone (...	8.821	43	558	0.18	ug/L	#	43
52) t-1,3-Dichloropropene	8.839	75	546	0.19	ug/L	#	45
56) 1,2-Dibromoethane (EDB)	9.435	107	264	0.13	ug/L	#	8
57) 2-Hexanone	9.672	43	323	0.14	ug/L	#	35
58) Chlorobenzene	9.934	112	1373	0.26	ug/L	#	53
59) Ethylbenzene	9.952	91	2378	0.26	ug/L		97
61) m,p-Xylenes (2)	10.092	91	4252	0.62	ug/L		98
62) o-Xylene	10.469	91	1297	0.19	ug/L		90
63) Styrene	10.524	104	1219	0.23	ug/L		93
65) Isopropylbenzene	10.737	105	2610	0.32	ug/L		92
68) Bromobenzene	11.060	156	577	0.28	ug/L		89
69) n-Propylbenzene	11.078	91	4874	0.53	ug/L		94
71) 2-Chlorotoluene	11.212	126	621	0.33	ug/L		96
72) 1,3,5-Trimethylbenzene	11.236	105	2721	0.44	ug/L		95
74) t-1,4-Dichloro-2-butene	11.291	53	130	0.19	ug/L	#	1
75) 4-Chlorotoluene	11.345	91	3011	0.52	ug/L		95
76) tert-Butylbenzene	11.485	91	1544	0.43	ug/L		89
77) 1,2,4-Trimethylbenzene	11.540	105	2951	0.47	ug/L		97
78) sec-Butylbenzene	11.625	105	4731	0.61	ug/L		97
79) 4-Isopropyltoluene	11.729	119	4121	0.67	ug/L		95
80) 1,3-Dichlorobenzene	11.802	146	2503	0.69	ug/L		92

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062033.D
Acq On : 21 Jun 2019 12:07 am
Operator : MM
Sample : 9F20044-IBL4
Misc : 1X 5mL DI
ALS Vial : 17 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 10:40:25 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration

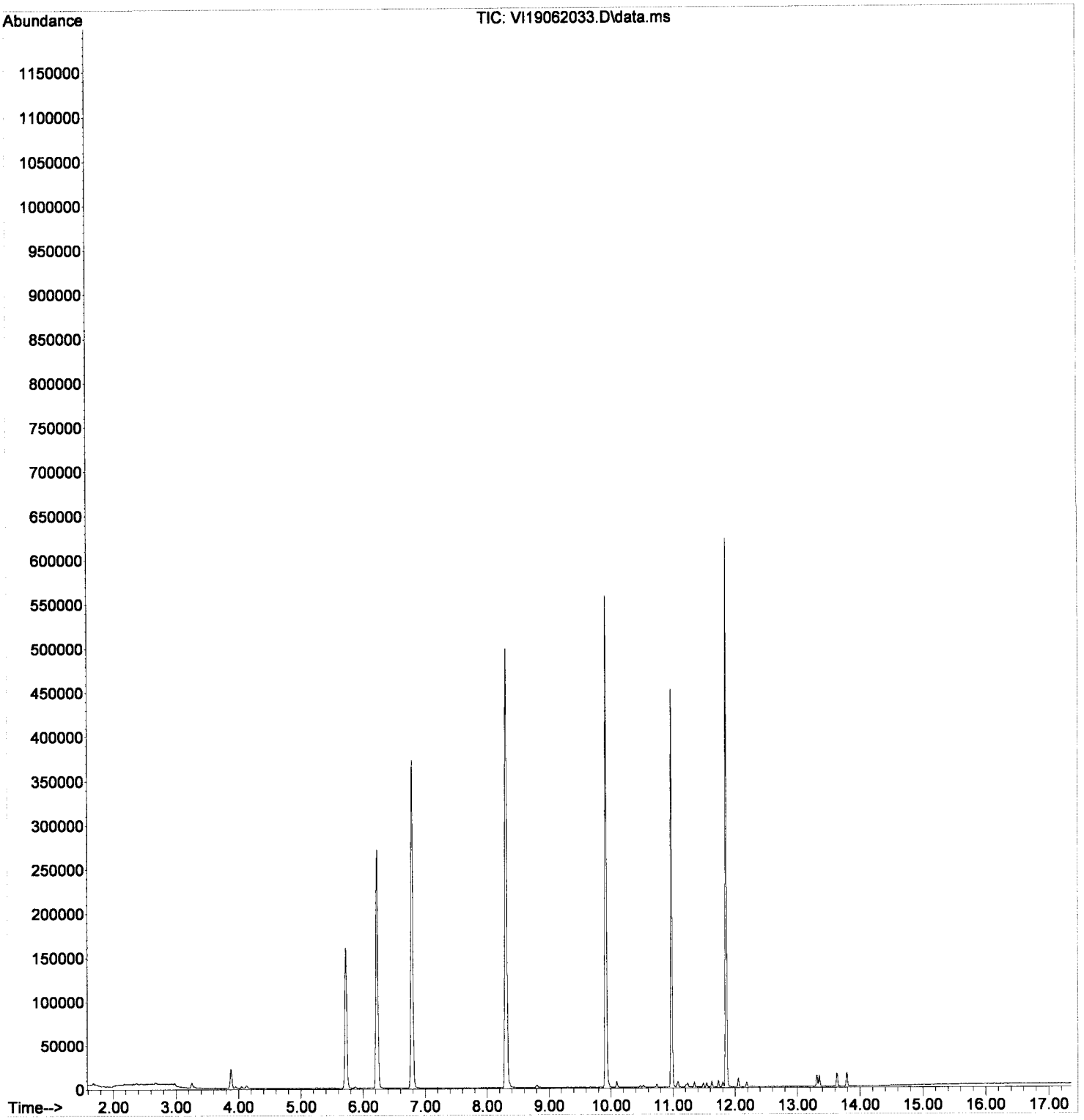
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
81) 1,4-Dichlorobenzene	11.869	146	2728	0.73	ug/L	77
82) n-Butylbenzene	12.051	91	5278	0.94	ug/L	99
83) 1,2-Dichlorobenzene	12.185	146	1650	0.47	ug/L	93
85) Hexachlorobutadiene	13.310	223	1654	3.25	ug/L	94
86) 1,2,4-Trichlorobenzene	13.347	180	4546	2.24	ug/L	96
87) Naphthalene	13.633	128	13737	2.07	ug/L	98
88) 1,2,3-Trichlorobenzene	13.791	180	5560	2.82	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062033.D
Acq On : 21 Jun 2019 12:07 am
Operator : MM
Sample : 9F20044-IBL4
Misc : 1X 5mL DI
ALS Vial : 17 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 10:40:25 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062034.D
Acq On : 21 Jun 2019 12:34 am
Operator : MM
Sample : 9F20044-IBL5
Misc : 1X 5mL DI
ALS Vial : 18 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 10:40:28 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration

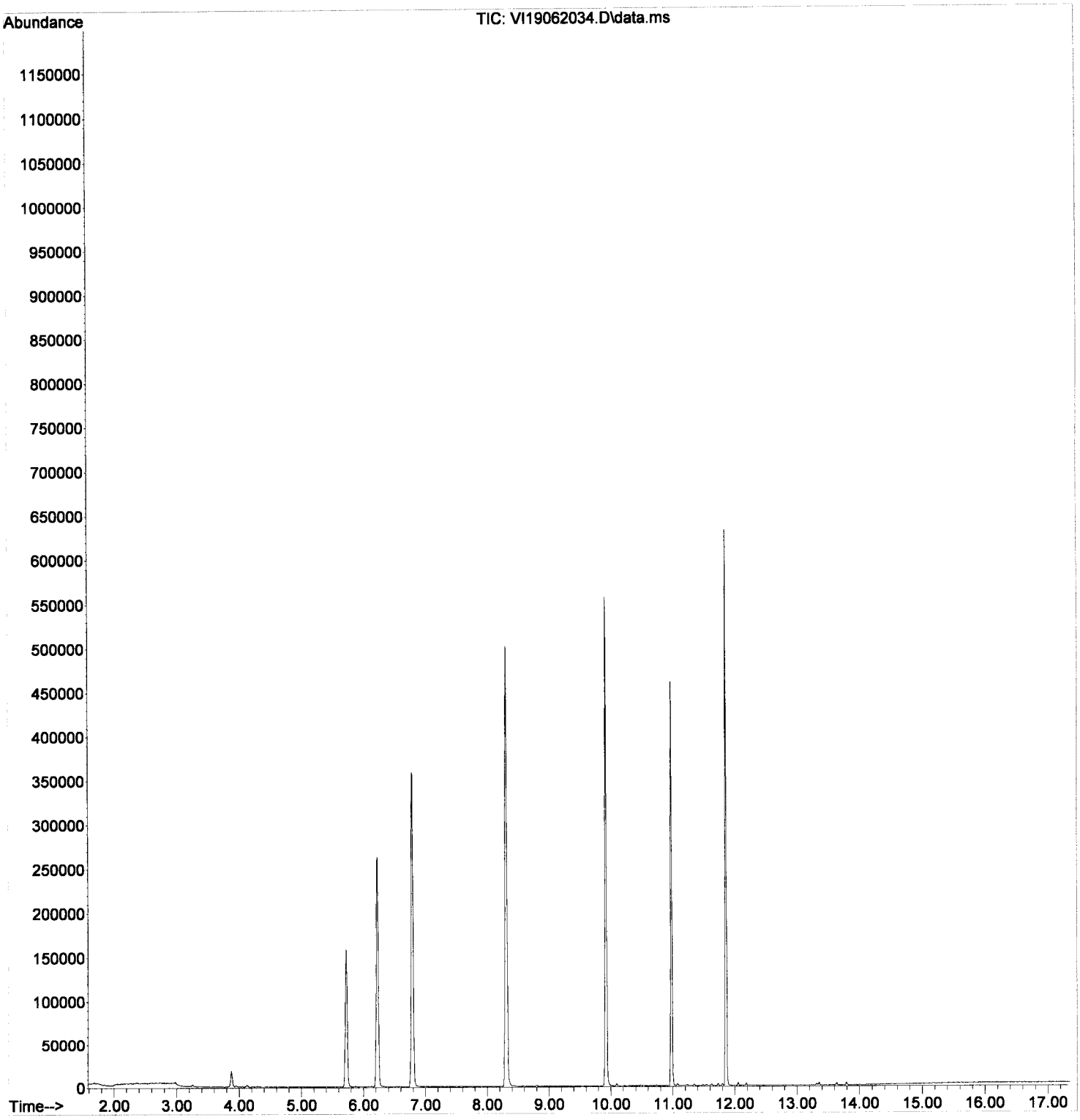
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.223	168	204332	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	9.916	117	304031	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	11.856	152	138269	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	5.718	111	108599	49.30	ug/L		0.00
39) 1,4-Difluorobenzene (S)	6.789	114	336843	49.53	ug/L		0.00
48) Toluene-d8 (S)	8.304	98	396397	49.90	ug/L		0.00
67) 4-Bromofluorobenzene (S)	10.980	174	117696	51.38	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.679	85	350	0.17	ug/L	#	49
3) Chloromethane	1.898	50	449	0.17	ug/L		88
5) Bromomethane	2.366	96	399	0.32	ug/L		80
6) Chloroethane	2.573	64	118	0.14	ug/L	#	36
7) Trichlorofluoromethane	2.664	101	322	0.12	ug/L		86
10) Carbon Disulfide	3.254	76	2804	0.56	ug/L		92
11) Freon 113	3.278	101	341	0.19	ug/L	#	19
14) Methylene Chloride	3.875	84	8734	2.54	ug/L		91
15) Acetone	3.954	43	2327	2.34	ug/L		99
16) t-1,2-Dichloroethene	4.045	61	445	0.16	ug/L	#	73
19) tert-Butanol (TBA)	4.301	59	476	1.12	ug/L	#	19
33) 1,1-Dichloropropene	5.870	75	534	0.19	ug/L	#	43
49) Toluene	8.352	91	764	0.09	ug/L		80
50) Tetrachloroethene (PCE)	8.802	166	423	0.21	ug/L	#	71
58) Chlorobenzene	9.934	112	554	0.11	ug/L	#	1
59) Ethylbenzene	9.958	91	1086	0.12	ug/L		91
61) m,p-Xylenes (2)	10.092	91	1807	0.26	ug/L		88
63) Styrene	10.524	104	478	0.09	ug/L	#	42
65) Isopropylbenzene	10.737	105	954	0.12	ug/L		80
69) n-Propylbenzene	11.084	91	1963	0.21	ug/L		86
71) 2-Chlorotoluene	11.211	126	191	0.10	ug/L	#	69
72) 1,3,5-Trimethylbenzene	11.236	105	952	0.15	ug/L		92
75) 4-Chlorotoluene	11.345	91	1154	0.20	ug/L		89
76) tert-Butylbenzene	11.485	91	470	0.13	ug/L	#	87
77) 1,2,4-Trimethylbenzene	11.546	105	1165	0.18	ug/L		84
78) sec-Butylbenzene	11.625	105	1608	0.20	ug/L		81
79) 4-Isopropyltoluene	11.729	119	1612	0.26	ug/L		93
80) 1,3-Dichlorobenzene	11.808	146	891	0.24	ug/L		96
81) 1,4-Dichlorobenzene	11.868	146	1013	0.26	ug/L	#	54
82) n-Butylbenzene	12.051	91	2016	0.35	ug/L		97
83) 1,2-Dichlorobenzene	12.185	146	554	0.15	ug/L		86
85) Hexachlorobutadiene	13.310	223	251	0.48	ug/L		90
86) 1,2,4-Trichlorobenzene	13.353	180	1273	0.62	ug/L		99
87) Naphthalene	13.633	128	2801	0.41	ug/L		87
88) 1,2,3-Trichlorobenzene	13.791	180	1093	0.54	ug/L		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062034.D
Acq On : 21 Jun 2019 12:34 am
Operator : MM
Sample : 9F20044-IBL5
Misc : 1X 5mL DI
ALS Vial : 18 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 10:40:28 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062035.D
Acq On : 21 Jun 2019 1:01 am
Operator : MM
Sample : 9F20044-ICV1
Misc : 1X 5mL 20/40PPB VOCR
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 10:40:31 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.223	168	211553	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	9.916	117	319542	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	11.856	152	152532	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	5.724	111	113363	49.71	ug/L		0.00
39) 1,4-Difluorobenzene (S)	6.789	114	354716	50.38	ug/L		0.00
48) Toluene-d8 (S)	8.304	98	415243	49.74	ug/L		0.00
67) 4-Bromofluorobenzene (S)	10.974	174	124236	49.16	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.691	85	49699	22.65	ug/L		98
3) Chloromethane	1.904	50	57063	20.43	ug/L		95
4) Vinyl Chloride	2.007	62	50798	20.19	ug/L		97
5) Bromomethane	2.372	96	25047	19.28	ug/L		98
6) Chloroethane	2.506	64	17204	19.26	ug/L		84
7) Trichlorofluoromethane	2.670	101	55861	19.78	ug/L		97
8) Ethanol	3.260	45	1411	28.84	ug/L	#	51
9) 1,1-Dichloroethene	3.242	61	60084	21.02	ug/L		99
10) Carbon Disulfide	3.260	76	113731	22.08	ug/L		100
11) Freon 113	3.303	101	37994	20.46	ug/L		96
12) Iodomethane	3.400	142	17671	18.12	ug/L		89
13) Acrolein	3.631	56	11222	19.48	ug/L		72
14) Methylene Chloride	3.881	84	44830	20.53	ug/L		95
15) Acetone	3.954	43	40162	38.98	ug/L		97
16) t-1,2-Dichloroethene	4.051	61	60467	21.65	ug/L		97
17) n-Hexane	4.130	86	7966	20.43	ug/L	#	77
18) Methyl-tert-butyl-ether	4.179	73	138803	20.30	ug/L		91
19) tert-Butanol (TBA)	4.307	59	7014	15.94	ug/L		99
20) Diisopropyl ether (DIPE)	4.574	45	638	0.08	ug/L		80
21) 1,1-Dichloroethane	4.696	63	80850	21.97	ug/L		95
22) Acrylonitrile	4.757	53	23990	20.50	ug/L		99
24) Vinyl Acetate	4.964	43	90143	19.35	ug/L		97
25) c-1,2-Dichloroethene	5.250	61	61811	20.74	ug/L		98
26) 2,2-Dichloropropane	5.359	77	54474	18.95	ug/L		96
27) Bromochloromethane	5.457	130	30210	21.99	ug/L		93
28) Chloroform	5.536	83	78780	20.74	ug/L		98
29) Carbon Tetrachloride	5.669	117	47986	20.66	ug/L		95
30) Tetrahydrofuran	5.706	42	23696	19.88	ug/L		89
31) 1,1,1-Trichloroethane	5.742	97	64636	21.35	ug/L		96
33) 1,1-Dichloropropene	5.870	75	59757	20.70	ug/L		96
34) 2-Butanone (MEK)	5.864	43	67826	39.53	ug/L		98
35) Benzene	6.132	78	179880	20.38	ug/L		97
36) tert-Amyl methyl ether...	6.260	73	881	0.12	ug/L	#	33
37) 1,2-Dichloroethane (EDC)	6.345	62	61806	21.21	ug/L		93
38) iso-Butyl Alcohol	6.381	43	95229	543.92	ug/L		91
40) Trichloroethene (TCE)	6.752	130	44775	20.97	ug/L		96
42) Dibromomethane	7.209	93	29775	21.21	ug/L		95
43) 1,2-Dichloropropane	7.318	63	47417	20.98	ug/L		91
44) Bromodichloromethane	7.385	83	55480	21.28	ug/L		94
46) 2-Chloroethyl Vinyl Ether	8.030	63	37106	21.14	ug/L	#	100
47) c-1,3-Dichloropropene	8.097	75	68767	20.95	ug/L		91
49) Toluene	8.364	91	180214	19.77	ug/L		98
50) Tetrachloroethene (PCE)	8.802	166	43140	20.83	ug/L		87

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062035.D
Acq On : 21 Jun 2019 1:01 am
Operator : MM
Sample : 9F20044-ICV1
Misc : 1X 5mL 20/40PPB VOCR
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 10:40:31 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration

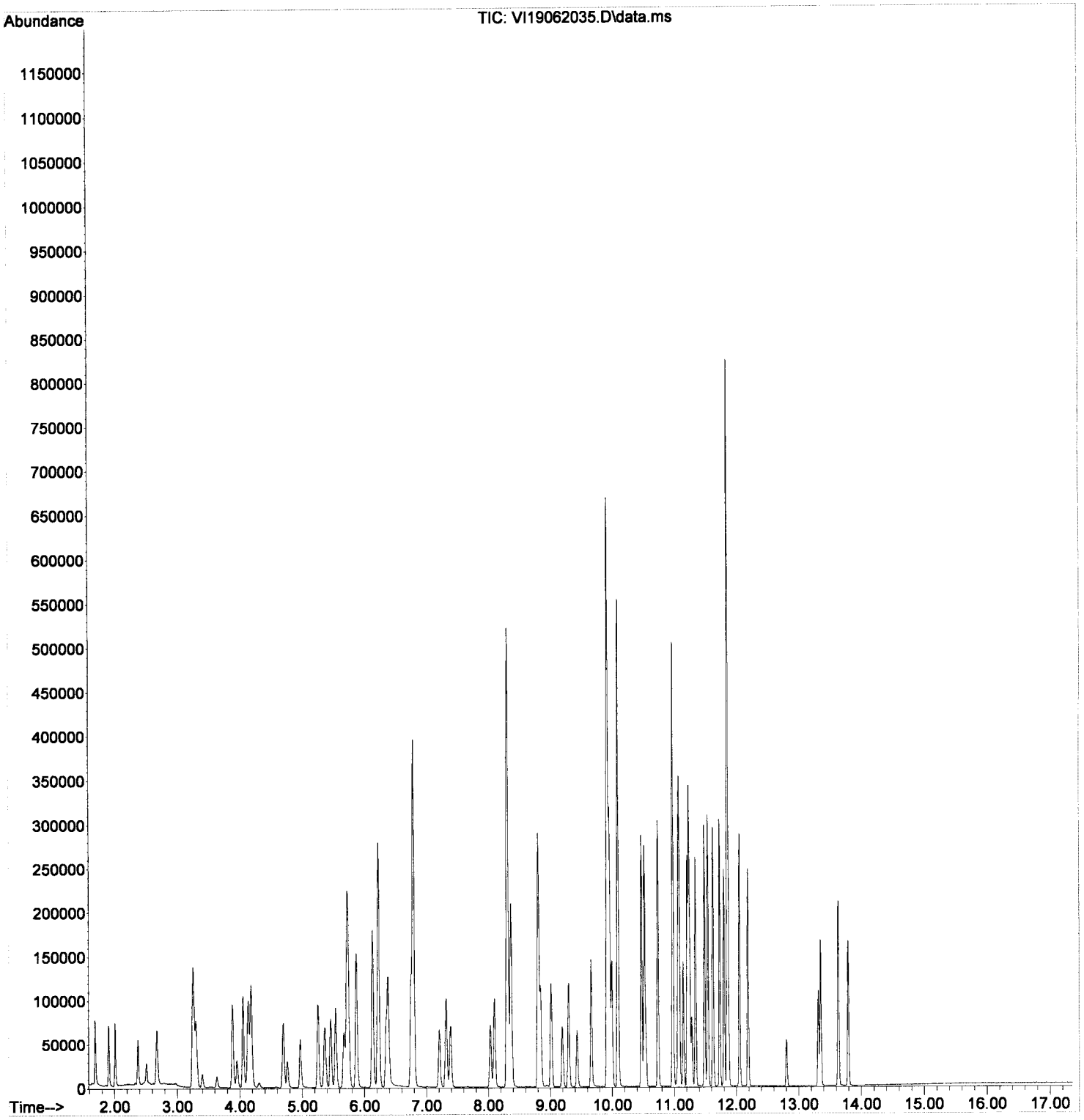
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
51) 4-Methyl-2-Pentanone (...	8.802	43	130735	40.91 ug/L	99
52) t-1,3-Dichloropropene	8.845	75	65130	21.67 ug/L	97
53) 1,1,2-Trichloroethane	9.015	97	43148	21.46 ug/L	93
54) Dibromochloromethane	9.192	129	39960	21.19 ug/L	99
55) 1,3-Dichloropropane	9.295	76	74203	20.71 ug/L	97
56) 1,2-Dibromoethane (EDB)	9.429	107	45587	21.53 ug/L	97
57) 2-Hexanone	9.660	43	95867	40.74 ug/L	93
58) Chlorobenzene	9.934	112	117137	21.13 ug/L	96
59) Ethylbenzene	9.958	91	199191	20.86 ug/L	99
60) 1,1,1,2-Tetrachloroethane	9.995	131	36621	21.64 ug/L	96
61) m,p-Xylenes (2)	10.092	91	301706	41.95 ug/L	99
62) o-Xylene	10.469	91	154185	21.03 ug/L	99
63) Styrene	10.518	104	119942	21.42 ug/L	94
64) Bromoform	10.542	173	25745	21.07 ug/L	98
65) Isopropylbenzene	10.737	105	181250	20.88 ug/L	100
68) Bromobenzene	11.059	156	48474	20.73 ug/L #	76
69) n-Propylbenzene	11.078	91	214005	20.61 ug/L	97
70) 1,1,2,2-Tetrachloroethane	11.145	85	40143	20.50 ug/L	96
71) 2-Chlorotoluene	11.212	126	43741	20.86 ug/L	96
72) 1,3,5-Trimethylbenzene	11.236	105	145599	20.75 ug/L	99
73) 1,2,3-Trichloropropane	11.254	110	19238	21.39 ug/L	95
74) t-1,4-Dichloro-2-butene	11.285	53	14134	18.62 ug/L	80
75) 4-Chlorotoluene	11.339	91	135297	20.81 ug/L	94
76) tert-Butylbenzene	11.485	91	83531	20.66 ug/L	92
77) 1,2,4-Trimethylbenzene	11.540	105	146609	20.84 ug/L	94
78) sec-Butylbenzene	11.625	105	180274	20.71 ug/L	98
79) 4-Isopropyltoluene	11.729	119	146435	21.32 ug/L	99
80) 1,3-Dichlorobenzene	11.802	146	86665	21.18 ug/L	99
81) 1,4-Dichlorobenzene	11.869	146	86900	20.58 ug/L	96
82) n-Butylbenzene	12.051	91	132800	21.08 ug/L	98
83) 1,2-Dichlorobenzene	12.185	146	83194	20.99 ug/L	99
84) 1,2-Dibromo-3-Chloropr...	12.805	157	12979	20.99 ug/L	92
85) Hexachlorobutadiene	13.310	223	12230	21.41 ug/L	93
86) 1,2,4-Trichlorobenzene	13.347	180	48327	21.20 ug/L	95
87) Naphthalene	13.633	128	157847	21.17 ug/L	96
88) 1,2,3-Trichlorobenzene	13.791	180	46690	21.10 ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062035.D
Acq On : 21 Jun 2019 1:01 am
Operator : MM
Sample : 9F20044-ICV1
Misc : 1X 5mL 20/40PPB VOCR
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 10:40:31 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062036.D
Acq On : 21 Jun 2019 1:28 am
Operator : MM
Sample : 9F20044-ICV2
Misc : 1X 5mL 5/1250PPB OXY
ALS Vial : 20 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 10:40:34 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.223	168	208504	50.00 ug/L		0.00
45) Chlorobenzene-d5 (I)	9.915	117	309465	50.00 ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	11.856	152	138921	50.00 ug/L		0.00
System Monitoring Compounds						
32) Dibromofluoromethane (S)	5.724	111	111258	49.50 ug/L		0.00
39) 1,4-Difluorobenzene (S)	6.789	114	348415	50.21 ug/L		0.00
48) Toluene-d8 (S)	8.303	98	402744	49.81 ug/L		0.00
67) 4-Bromofluorobenzene (S)	10.980	174	118086	51.31 ug/L		0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.684	85	326	0.15 ug/L	#	49
3) Chloromethane	1.903	50	1208	0.44 ug/L		91
4) Vinyl Chloride	2.007	62	397	0.16 ug/L	#	50
5) Bromomethane	2.366	96	748	0.58 ug/L		91
6) Chloroethane	2.524	64	386	0.44 ug/L	#	36
7) Trichlorofluoromethane	2.676	101	248	0.09 ug/L	#	27
8) Ethanol	3.242	45	64272	1332.92 ug/L		86
9) 1,1-Dichloroethene	3.242	61	412	0.15 ug/L	#	64
10) Carbon Disulfide	3.254	76	2563	0.50 ug/L		93
12) Iodomethane	3.394	142	360	2.97 ug/L	#	47
14) Methylene Chloride	3.881	84	3140	Below Cal		90
15) Acetone	3.960	43	862	0.85 ug/L	#	44
16) t-1,2-Dichloroethene	4.051	61	785	0.29 ug/L		69
19) tert-Butanol (TBA)	4.300	59	584118	1346.74 ug/L		85
20) Diisopropyl ether (DIPE)	4.574	45	35105	4.51 ug/L		92
21) 1,1-Dichloroethane	4.696	63	819	0.23 ug/L		85
23) Ethyl-tert-butyl ether...	4.951	59	34670	4.60 ug/L		97
24) Vinyl Acetate	4.945	43	3943	0.86 ug/L		56
25) c-1,2-Dichloroethene	5.255	61	628	0.21 ug/L		99
26) 2,2-Dichloropropane	5.365	77	243	0.09 ug/L	#	30
28) Chloroform	5.535	83	894	0.24 ug/L		80
31) 1,1,1-Trichloroethane	5.748	97	273	0.09 ug/L	#	25
33) 1,1-Dichloropropene	5.870	75	539	0.19 ug/L	#	43
35) Benzene	6.138	78	1949	0.22 ug/L		85
36) tert-Amyl methyl ether...	6.253	73	32321	4.46 ug/L		94
37) 1,2-Dichloroethane (EDC)	6.351	62	361	0.13 ug/L		54
38) iso-Butyl Alcohol	6.253	43	10925	63.31 ug/L	#	55
40) Trichloroethene (TCE)	6.746	130	490	0.23 ug/L	#	71
41) Tert-Amyl-Ethyl-Ether ...	7.001	59	24945	4.48 ug/L		86
43) 1,2-Dichloropropane	7.318	63	353	0.16 ug/L	#	35
44) Bromodichloromethane	7.391	83	326	0.13 ug/L		97
47) c-1,3-Dichloropropene	8.096	75	449	0.14 ug/L	#	75
49) Toluene	8.364	91	2123	0.24 ug/L		72
50) Tetrachloroethene (PCE)	8.802	166	441	0.22 ug/L	#	68
52) t-1,3-Dichloropropene	8.851	75	332	0.11 ug/L	#	45
55) 1,3-Dichloropropane	9.295	76	355	0.10 ug/L	#	47
58) Chlorobenzene	9.934	112	1542	0.29 ug/L	#	36
59) Ethylbenzene	9.958	91	2213	0.24 ug/L		88
60) 1,1,1,2-Tetrachloroethane	9.995	131	208	0.13 ug/L		84
61) m,p-Xylenes (2)	10.092	91	3501	0.50 ug/L		90
62) o-Xylene	10.469	91	1599	0.23 ug/L		93
63) Styrene	10.518	104	1284	0.24 ug/L		89
65) Isopropylbenzene	10.737	105	1651	0.20 ug/L		90

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062036.D
Acq On : 21 Jun 2019 1:28 am
Operator : MM
Sample : 9F20044-ICV2
Misc : 1X 5mL 5/1250PPB OXY
ALS Vial : 20 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 10:40:34 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration

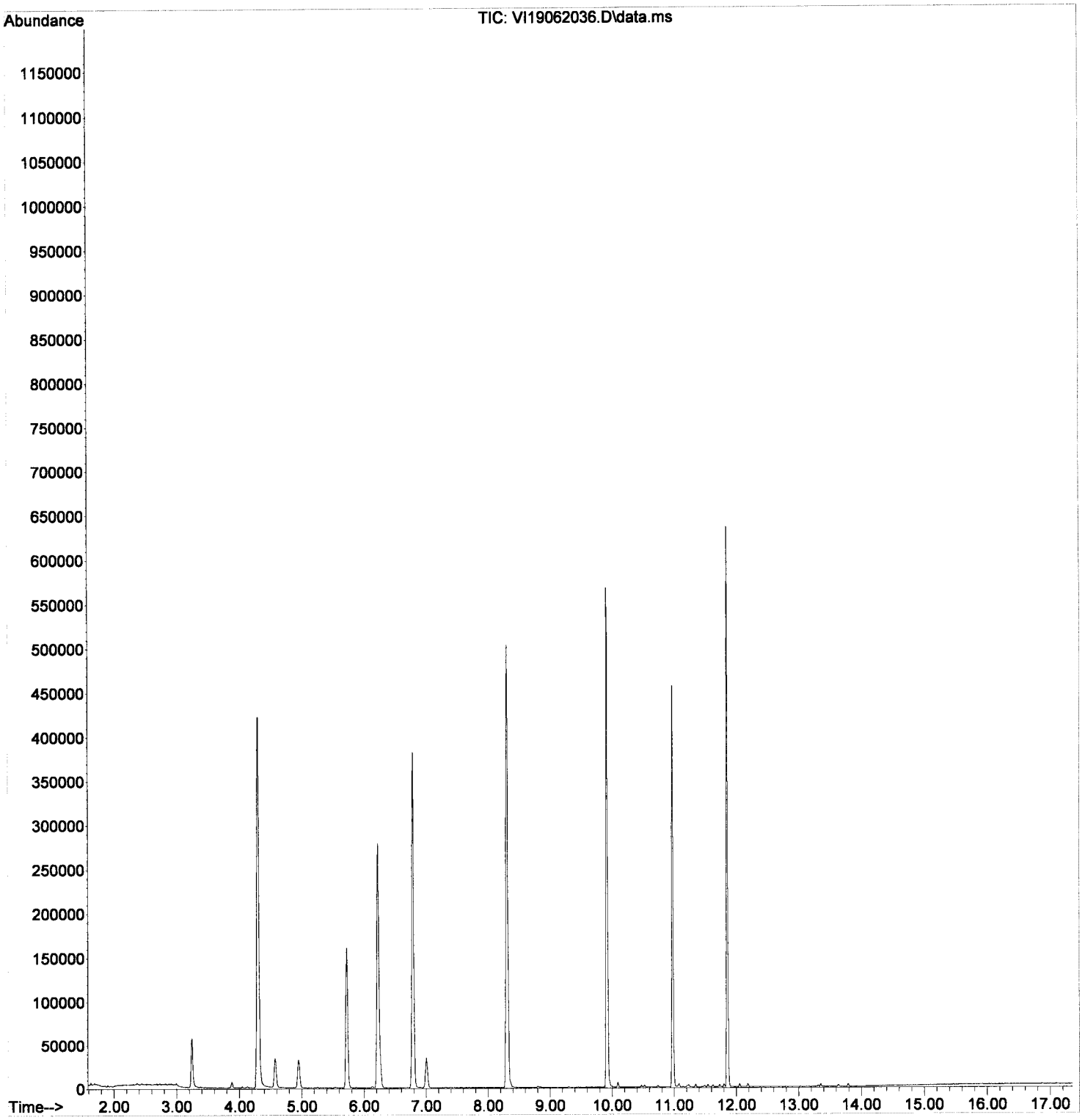
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
68) Bromobenzene	11.065	156	562	0.26	ug/L		92
69) n-Propylbenzene	11.077	91	2498	0.26	ug/L		96
71) 2-Chlorotoluene	11.211	126	333	0.17	ug/L	#	84
72) 1,3,5-Trimethylbenzene	11.236	105	1639	0.26	ug/L		89
75) 4-Chlorotoluene	11.345	91	1923	0.32	ug/L		91
76) tert-Butylbenzene	11.485	91	831	0.23	ug/L		89
77) 1,2,4-Trimethylbenzene	11.540	105	1848	0.29	ug/L		93
78) sec-Butylbenzene	11.625	105	1894	0.24	ug/L		99
79) 4-Isopropyltoluene	11.734	119	1801	0.29	ug/L		92
80) 1,3-Dichlorobenzene	11.807	146	1296	0.35	ug/L		98
81) 1,4-Dichlorobenzene	11.868	146	1379	0.36	ug/L	#	51
82) n-Butylbenzene	12.051	91	2110	0.37	ug/L		94
83) 1,2-Dichlorobenzene	12.191	146	1048	0.29	ug/L		96
85) Hexachlorobutadiene	13.310	223	388	0.75	ug/L		83
86) 1,2,4-Trichlorobenzene	13.353	180	1229	0.59	ug/L		93
87) Naphthalene	13.633	128	2660	0.39	ug/L		90
88) 1,2,3-Trichlorobenzene	13.791	180	1065	0.53	ug/L		94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062036.D
Acq On : 21 Jun 2019 1:28 am
Operator : MM
Sample : 9F20044-ICV2
Misc : 1X 5mL 5/1250PPB OXY
ALS Vial : 20 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 10:40:34 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062037.D
Acq On : 21 Jun 2019 1:55 am
Operator : MM
Sample : 9F20044-IBL6
Misc : 1X 5mL DI
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 10:40:37 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration

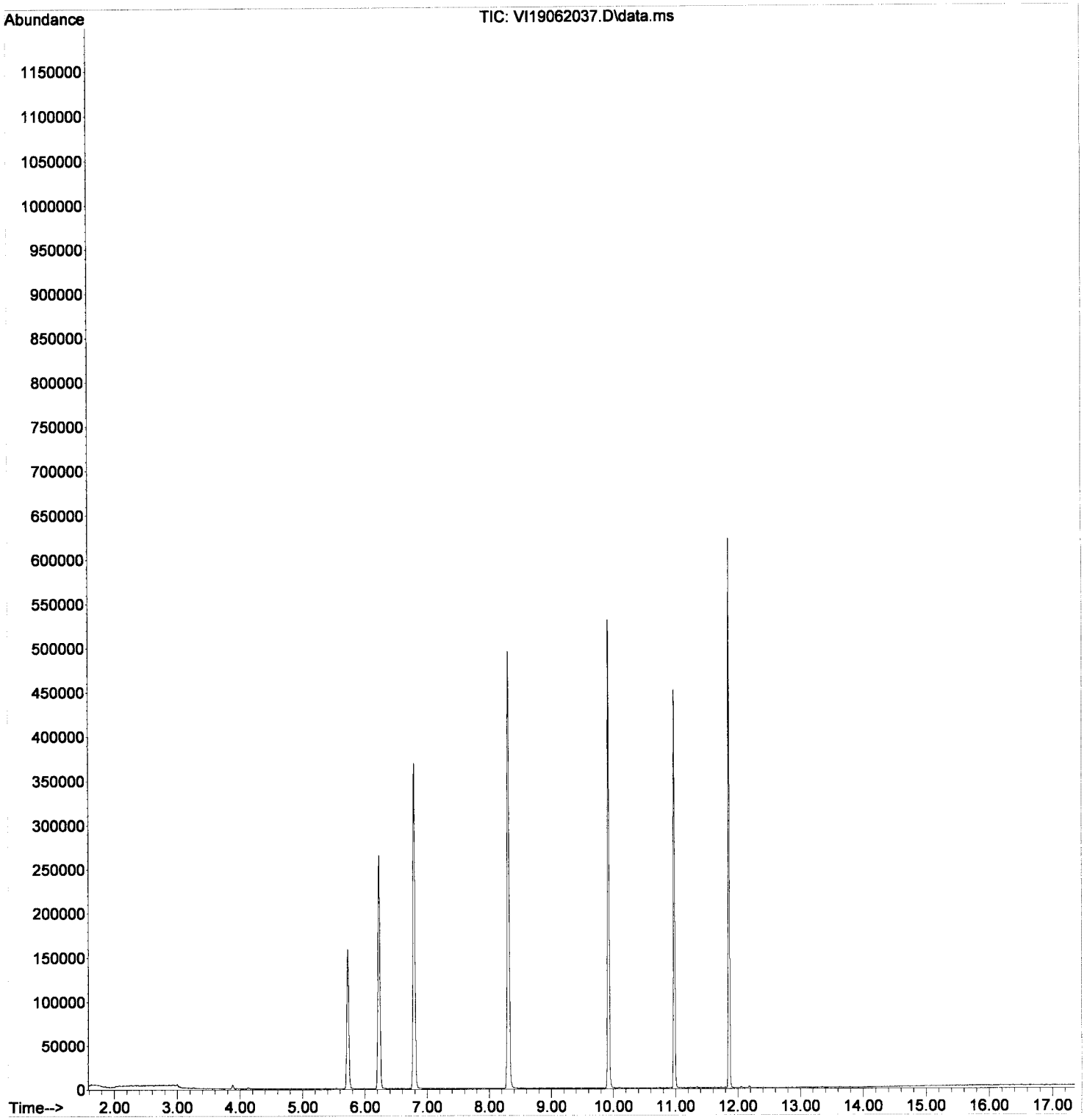
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.223	168	201188	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	9.916	117	295200	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	11.856	152	134710	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	5.724	111	108642	50.09	ug/L		0.00
39) 1,4-Difluorobenzene (S)	6.789	114	337743	50.44	ug/L		0.00
48) Toluene-d8 (S)	8.304	98	393483	51.02	ug/L		0.00
67) 4-Bromofluorobenzene (S)	10.980	174	112738	50.51	ug/L		0.00
Target Compounds							Qvalue
3) Chloromethane	1.904	50	412	0.16	ug/L	#	47
5) Bromomethane	2.378	96	218	0.18	ug/L		74
6) Chloroethane	2.591	64	117	0.14	ug/L	#	36
10) Carbon Disulfide	3.254	76	1104	0.23	ug/L		78
14) Methylene Chloride	3.881	84	2137	Below Cal			95
15) Acetone	3.966	43	565	0.58	ug/L	#	44
28) Chloroform	5.536	83	394	0.11	ug/L	#	28
61) m,p-Xylenes (2)	10.092	91	711	0.11	ug/L		85
75) 4-Chlorotoluene	11.345	91	516	0.09	ug/L	#	45
80) 1,3-Dichlorobenzene	11.802	146	381	0.11	ug/L	#	77
81) 1,4-Dichlorobenzene	11.869	146	419	0.11	ug/L	#	1
82) n-Butylbenzene	12.051	91	815	0.15	ug/L		90
86) 1,2,4-Trichlorobenzene	13.353	180	367	0.18	ug/L		88
87) Naphthalene	13.639	128	867	0.13	ug/L		81
88) 1,2,3-Trichlorobenzene	13.797	180	255	0.13	ug/L		78

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062037.D
Acq On : 21 Jun 2019 1:55 am
Operator : MM
Sample : 9F20044-IBL6
Misc : 1X 5mL DI
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 10:40:37 2019
Quant Method : C:\msdchem\1\methods\VI190621W+.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jun 21 10:05:40 2019
Response via : Initial Calibration

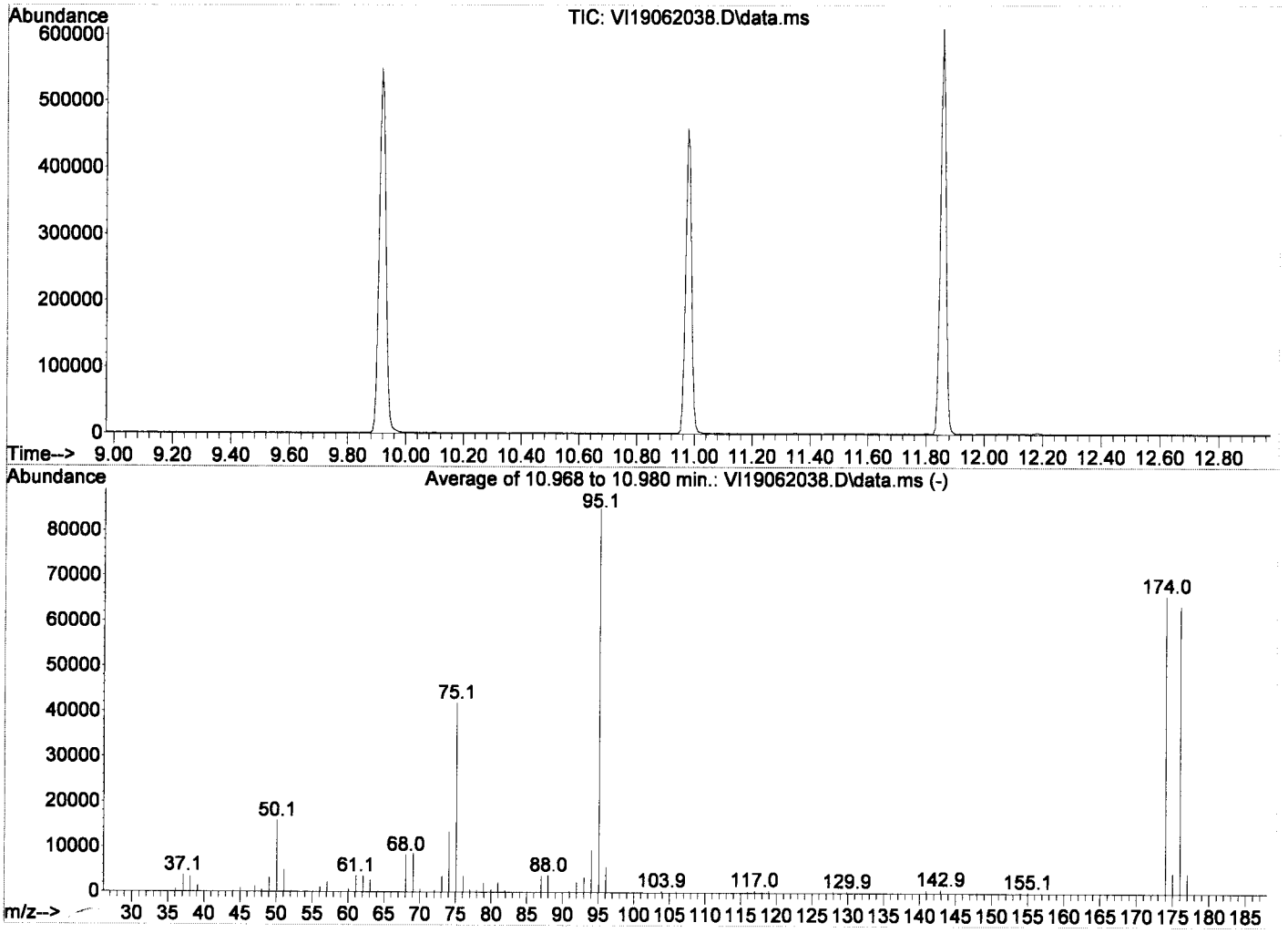


BFB

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062038.D
Acq On : 21 Jun 2019 2:22 am
Operator : MM
Sample : 9F20044-TUN2
Misc : A19C125 5mL BFB (IS/SURR)
ALS Vial : 22 Sample Multiplier: 1

Integration File: APEXG.P

Method : C:\msdchem\1\methods\VI190621G.M
Title : NWTPH-Gx by GC/MS
Last Update : Fri Jun 21 11:04:13 2019



AutoFind: Scans 1543, 1544, 1545; Background Corrected with Scan 1537

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	12	40	18.6	15805	PASS
75	95	30	60	49.3	41891	PASS
95	95	100	100	100.0	84939	PASS
96	95	5	9	6.7	5684	PASS
173	174	0.00	2	0.2	125	PASS
174	95	50	200	77.5	65805	PASS
175	174	5	9	7.0	4598	PASS
176	174	95	101	96.7	63611	PASS
177	176	5	9	6.7	4283	PASS

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062038.D
Acq On : 21 Jun 2019 2:22 am
Operator : MM
Sample : 9F20044-TUN2
Misc : A19C125 5mL BFB (IS/SURR)
ALS Vial : 22 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 11:07:55 2019
Quant Method : C:\msdchem\1\methods\VI190621G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Jun 21 11:04:13 2019
Response via : Initial Calibration

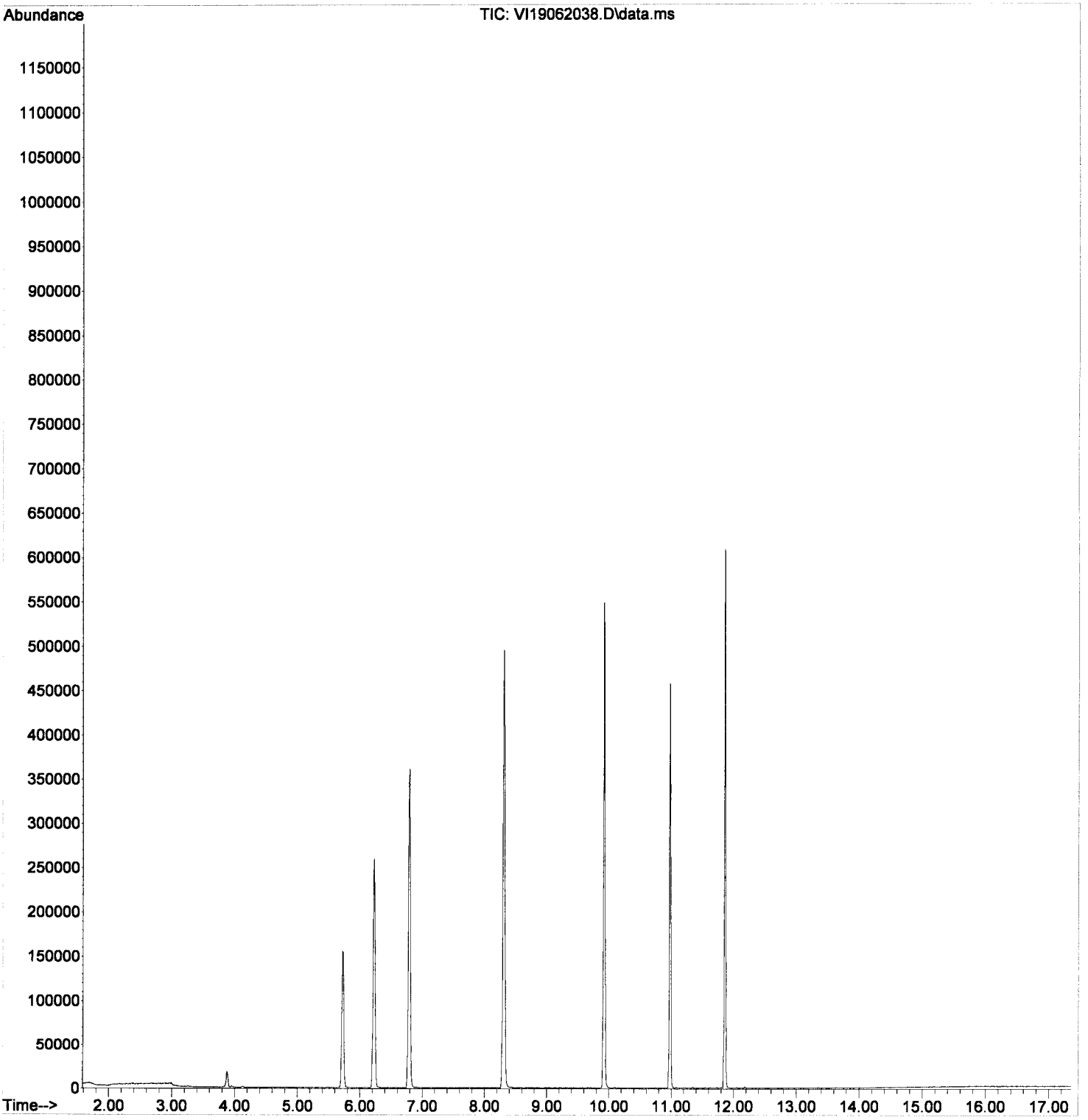
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Pentafluorobenzene (IS)	6.223	168	199857	50.00 ug/L	0.00
System Monitoring Compounds					
2) 1,4-Difluorobenzene (Sur)	6.789	114	335918	49.97 ug/L	0.00
3) 4-Bromofluorobenzene (...	10.980	174	112478	48.14 ug/L	0.00
9) Toluene-d8 (NR)	8.304	98	391051	0.00 ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.916	117	298571	0.00 ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.856	150	207818	0.00 ug/L	0.00
Target Compounds					Qvalue
4) NWTPH-Gx (TPH)	9.890	TIC	29758m	29.66 ug/L	
5) TPHg (C5-C9)	9.890	TIC	392801m	21.11 ug/L	
6) TPHg (C6-C10)	9.890	TIC	328745m	20.95 ug/L	
7) CA-LUFT (C5-C12)	9.890	TIC	430664m	23.65 ug/L	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062038.D
Acq On : 21 Jun 2019 2:22 am
Operator : MM
Sample : 9F20044-TUN2
Misc : A19C125 5mL BFB (IS/SURR)
ALS Vial : 22 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

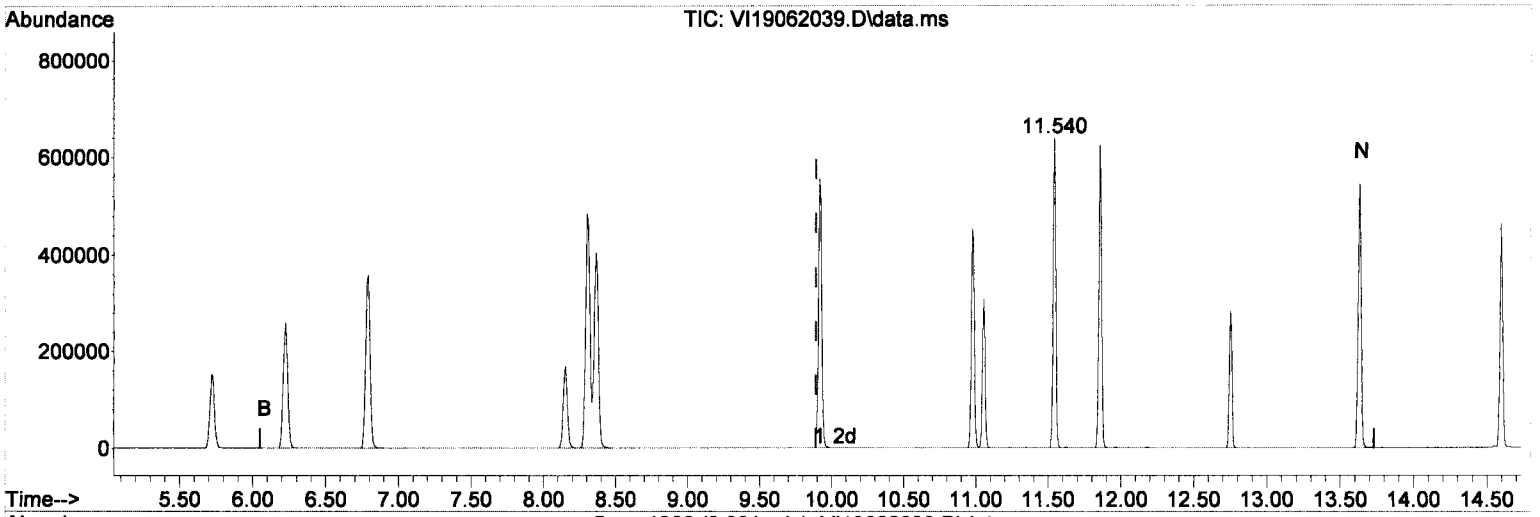
Quant Time: Jun 21 11:07:55 2019
Quant Method : C:\msdchem\1\methods\VI190621G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Jun 21 11:04:13 2019
Response via : Initial Calibration

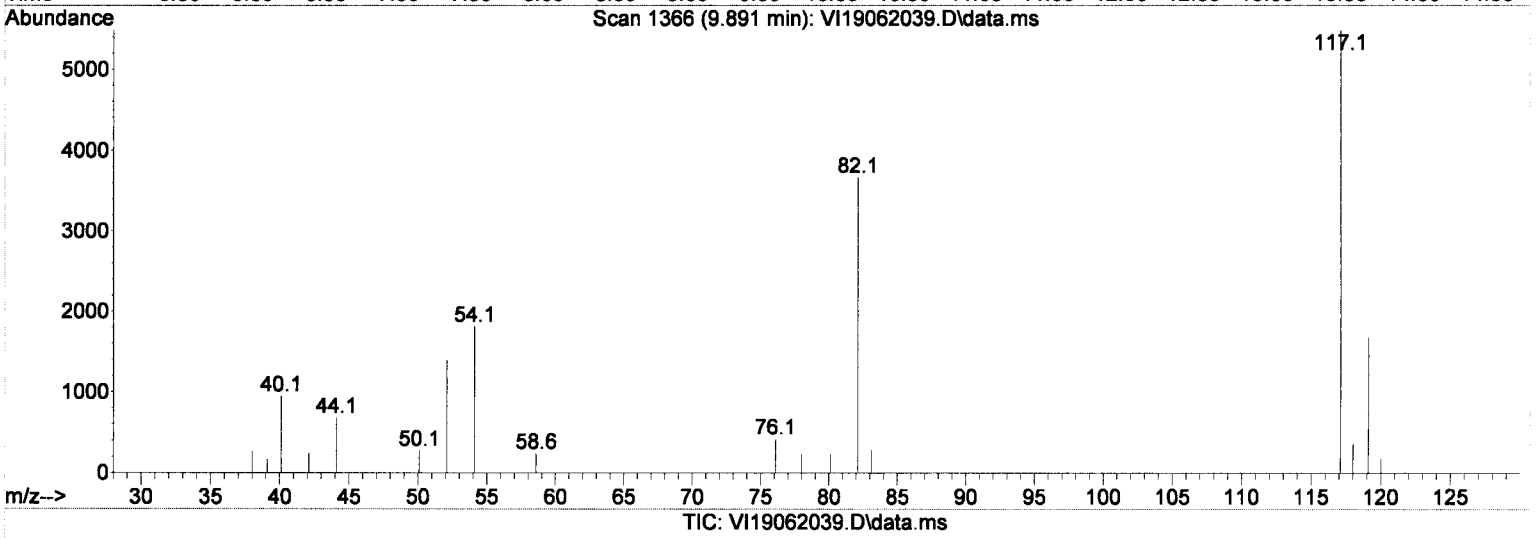


Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062039.D
Acq On : 21 Jun 2019 2:49 am
Operator : MM
Sample : 9F20044-RT1
Misc : A1A167 VPH RT STD
ALS Vial : 23 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 11:08:09 2019
Quant Method : C:\msdchem\1\methods\VI190621G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Jun 21 11:04:13 2019
Response via : Initial Calibration





(4) NWTPH-Gx (TPH) (H)

9.890min (0.000) 575.55 ug/L m

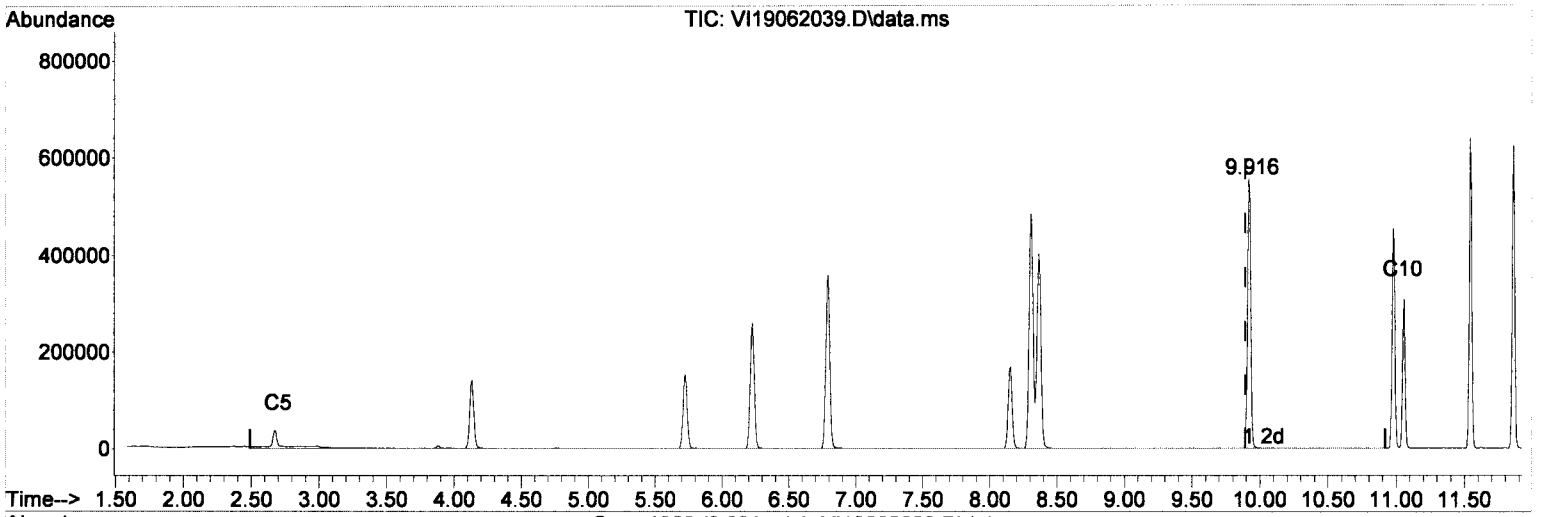
response 3545037

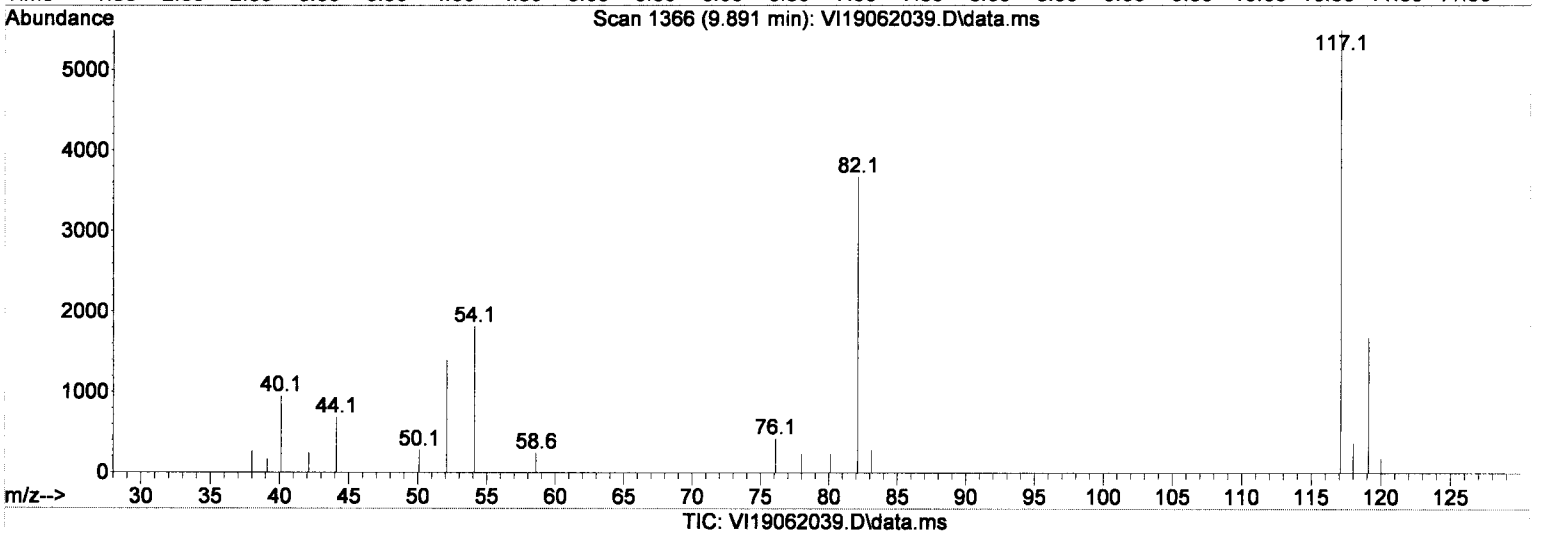
Signal	Exp%	Act%
TIC	100.00	100.00
0.00	0.00	0.96#
0.00	0.00	0.74#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062039.D
Acq On : 21 Jun 2019 2:49 am
Operator : MM
Sample : 9F20044-RT1
Misc : A1A167 VPH RT STD
ALS Vial : 23 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 11:08:09 2019
Quant Method : C:\msdchem\1\methods\VI190621G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Jun 21 11:04:13 2019
Response via : Initial Calibration





TIC: VI19062039.D\data.ms

(5) TPHg (C5-C9) (H)

9.890min (0.000) 204.35 ug/L m

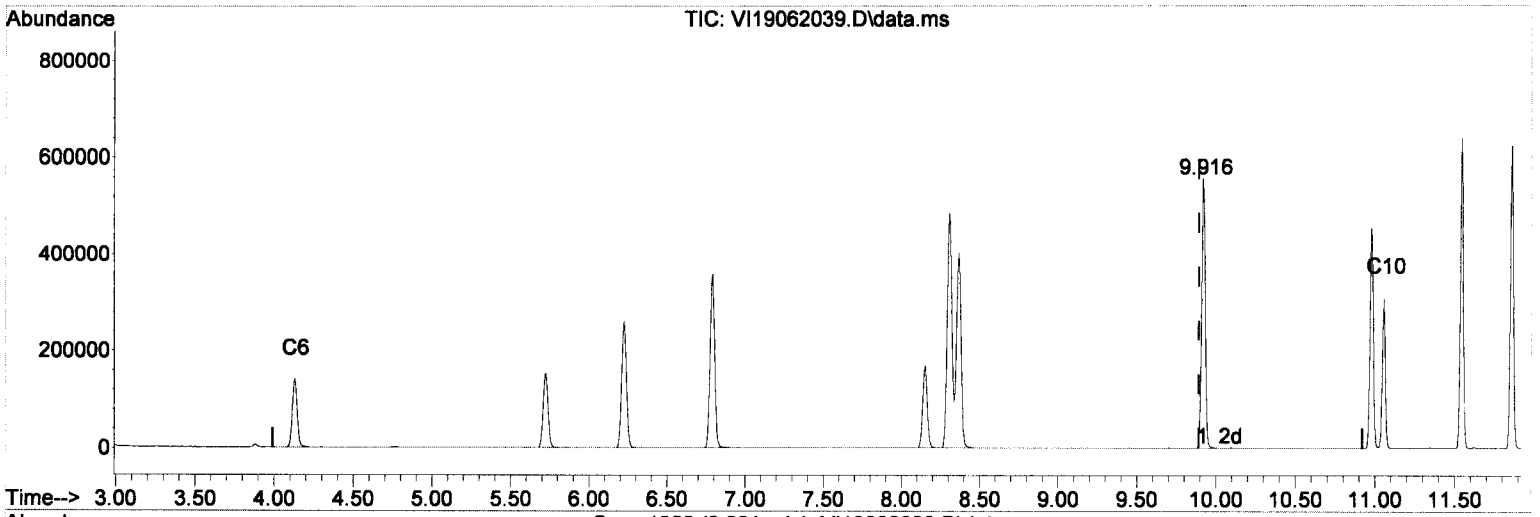
response 1858541

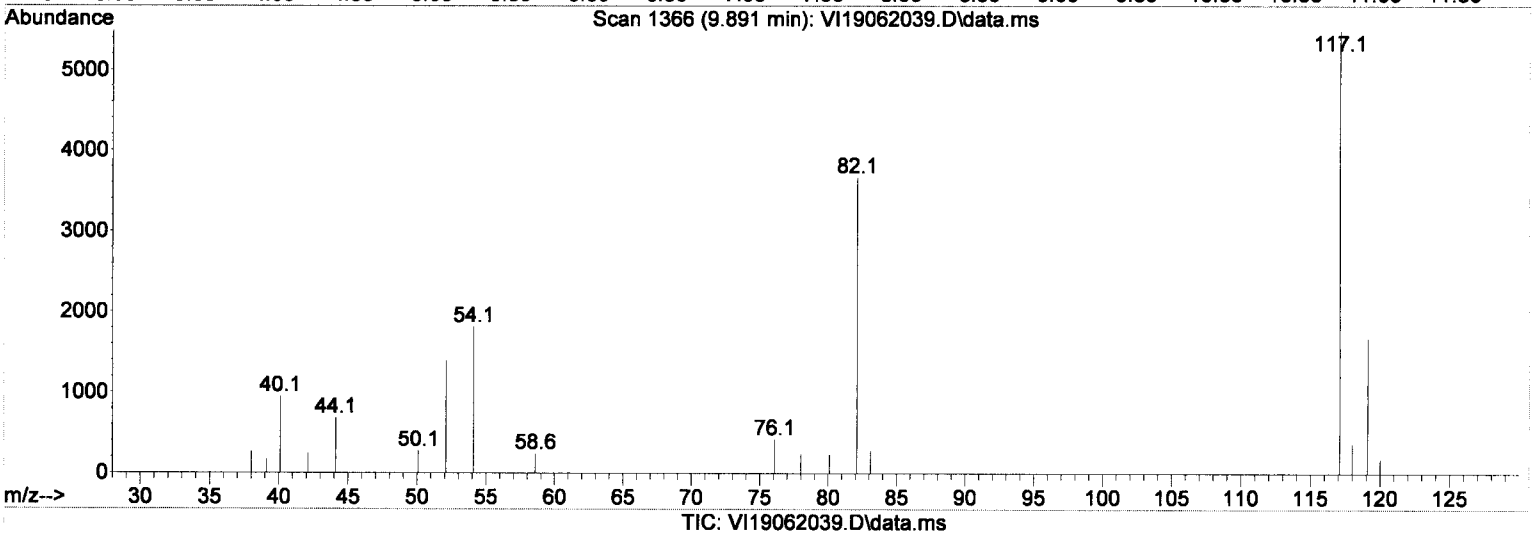
Signal	Exp%	Act%
TIC	100.00	100.00
0.00	0.00	1.83#
0.00	0.00	1.41#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062039.D
Acq On : 21 Jun 2019 2:49 am
Operator : MM
Sample : 9F20044-RT1
Misc : A1A167 VPH RT STD
ALS Vial : 23 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 11:08:09 2019
Quant Method : C:\msdchem\1\methods\VI190621G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Jun 21 11:04:13 2019
Response via : Initial Calibration





(6) TPHg (C6-C10) (H)

9.890min (0.000) 233.58 ug/L m

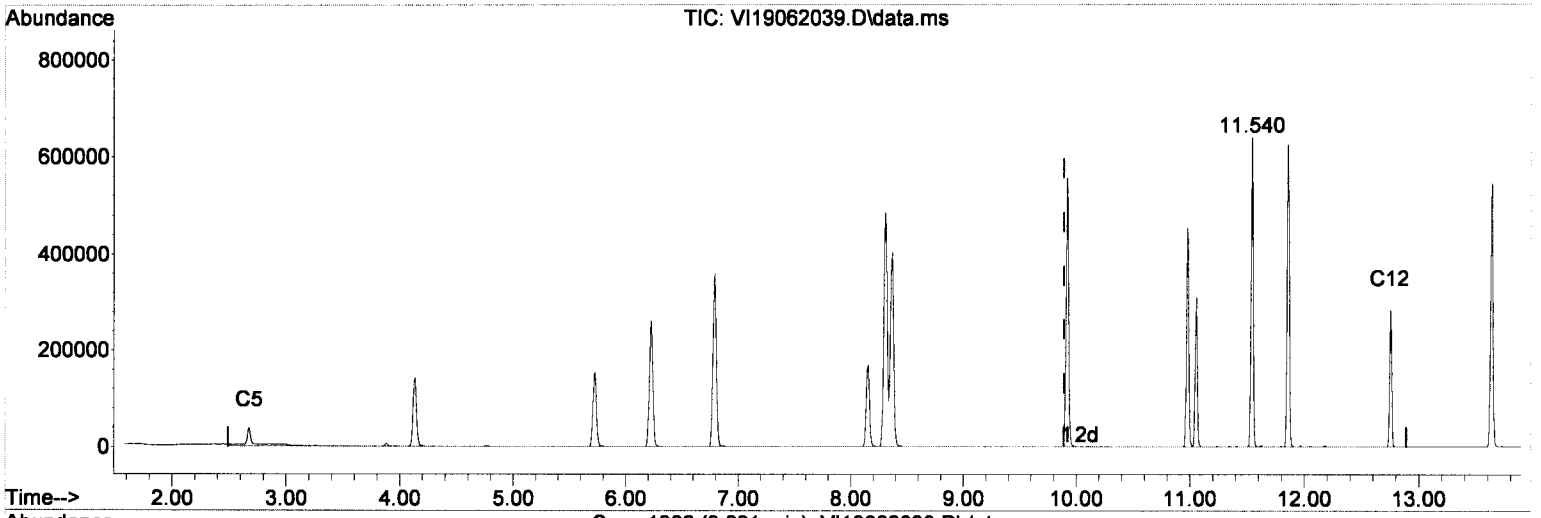
response 1767050

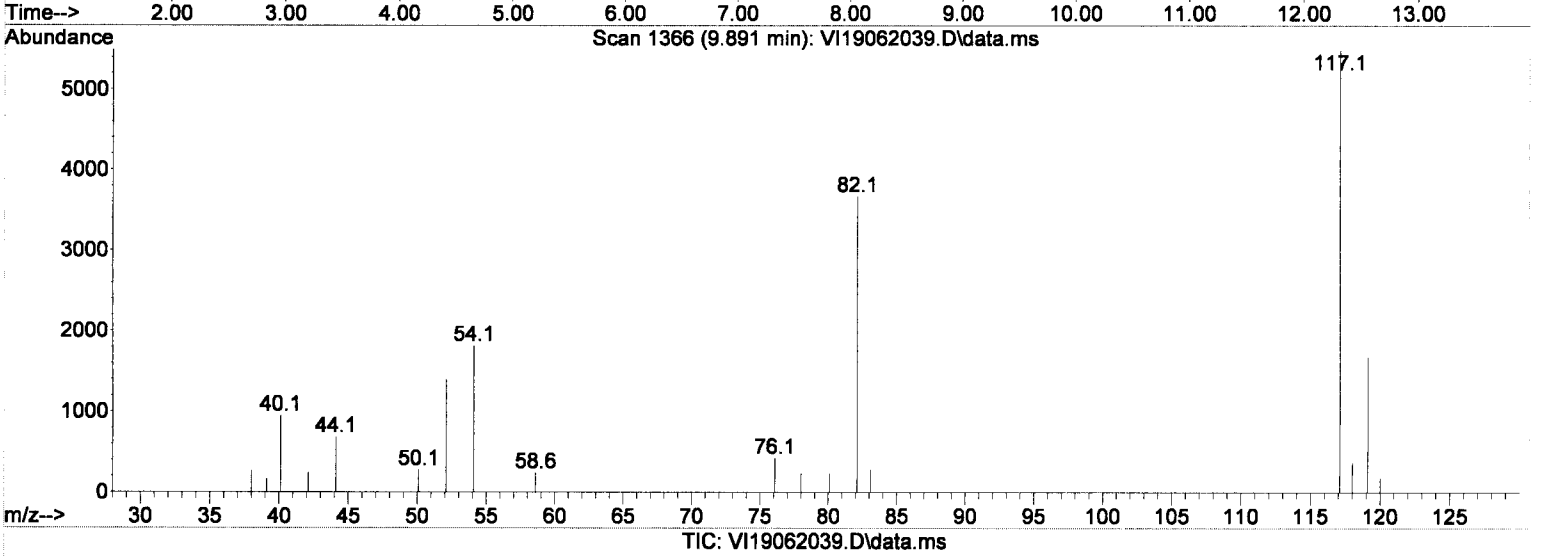
Signal	Exp%	Act%
TIC	100.00	100.00
0.00	0.00	1.92#
0.00	0.00	1.49#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062039.D
Acq On : 21 Jun 2019 2:49 am
Operator : MM
Sample : 9F20044-RT1
Misc : A1A167 VPH RT STD
ALS Vial : 23 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 11:08:09 2019
Quant Method : C:\msdchem\1\methods\VI190621G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Jun 21 11:04:13 2019
Response via : Initial Calibration





TIC: VI19062039.D\data.ms

(7) CA-LUFT (C5-C12) (H)

9.890min (0.000) 337.37 ug/L m

response 3469895

Signal	Exp%	Act%
TIC	100.00	100.00
0.00	0.00	0.98#
0.00	0.00	0.76#
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062039.D
Acq On : 21 Jun 2019 2:49 am
Operator : MM
Sample : 9F20044-RT1
Misc : A1A167 VPH RT STD
ALS Vial : 23 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 11:08:09 2019
Quant Method : C:\msdchem\1\methods\VI190621G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Jun 21 11:04:13 2019
Response via : Initial Calibration

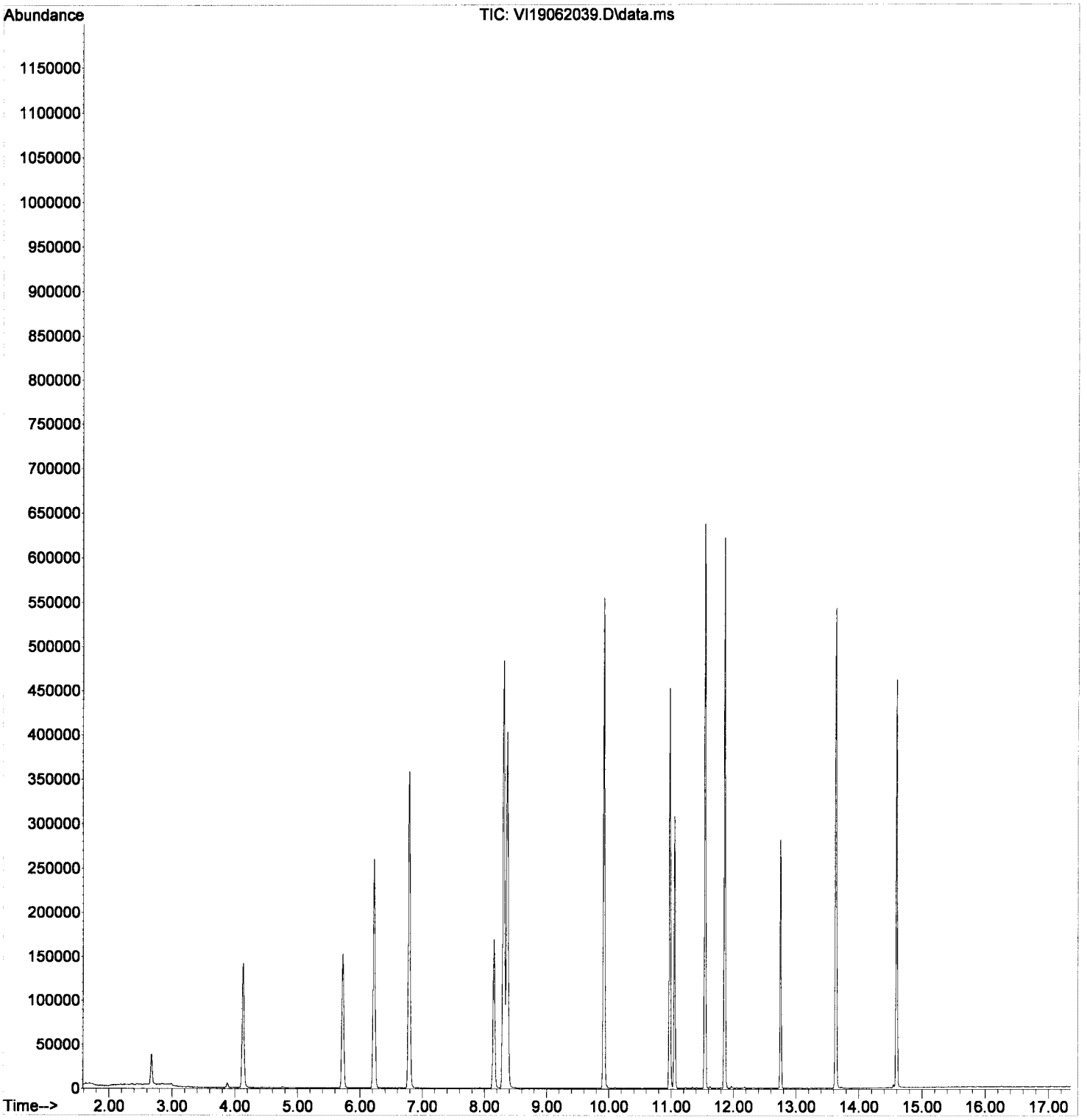
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.223	168	194046	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.789	114	326441	50.02	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.980	174	111816	49.29	ug/L	0.00
9) Toluene-d8 (NR)	8.303	98	383251	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.916	117	296736	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.856	150	213459	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.890	TIC	3545037m	575.55	ug/L	
5) TPHg (C5-C9)	9.890	TIC	1858541m	204.35	ug/L	
6) TPHg (C6-C10)	9.890	TIC	1767050m	233.58	ug/L	
7) CA-LUFT (C5-C12)	9.890	TIC	3469895m	337.37	ug/L	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062039.D
Acq On : 21 Jun 2019 2:49 am
Operator : MM
Sample : 9F20044-RT1
Misc : A1A167 VPH RT STD
ALS Vial : 23 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 11:08:09 2019
Quant Method : C:\msdchem\1\methods\VI190621G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Jun 21 11:04:13 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062040.D
Acq On : 21 Jun 2019 3:16 am
Operator : MM
Sample : 9F20044-IBL7
Misc : 1X 5mL DI
ALS Vial : 24 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 11:09:03 2019
Quant Method : C:\msdchem\1\methods\VI190621G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Jun 21 11:04:13 2019
Response via : Initial Calibration

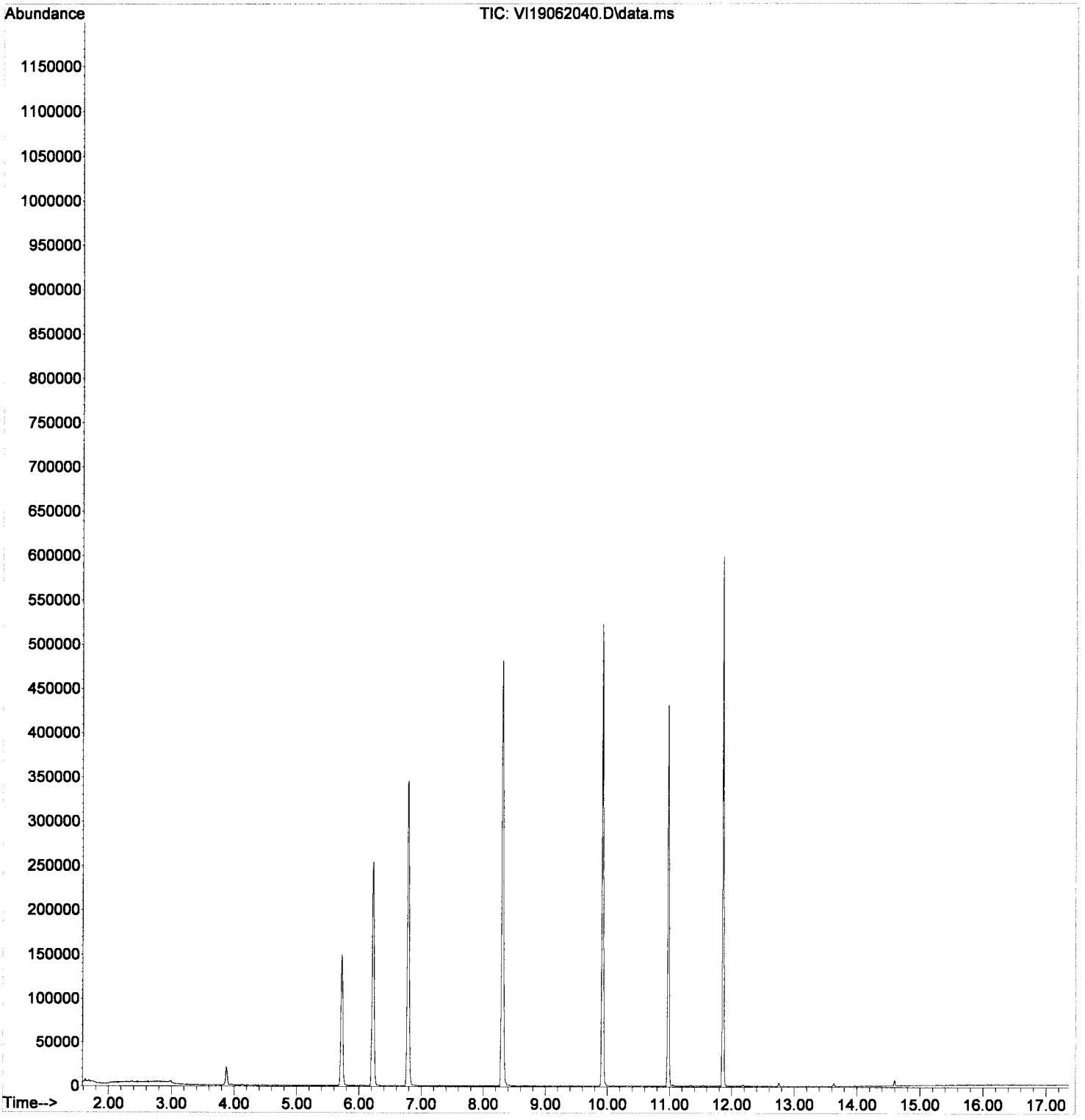
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.223	168	193860	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.789	114	324929	49.83	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.980	174	108973	48.08	ug/L	0.00
9) Toluene-d8 (NR)	8.304	98	377721	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.916	117	288051	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.856	150	201473	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.890	TIC	28123m	29.55	ug/L	
5) TPHg (C5-C9)	9.890	TIC	356658m	18.08	ug/L	
6) TPHg (C6-C10)	9.890	TIC	312995m	20.08	ug/L	
7) CA-LUFT (C5-C12)	9.890	TIC	395196m	21.33	ug/L	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062040.D
Acq On : 21 Jun 2019 3:16 am
Operator : MM
Sample : 9F20044-IBL7
Misc : 1X 5mL DI
ALS Vial : 24 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 11:09:03 2019
Quant Method : C:\msdchem\1\methods\VI190621G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Jun 21 11:04:13 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062041.D
Acq On : 21 Jun 2019 3:43 am
Operator : MM
Sample : 9F20044-ICB1
Misc : 1X 5mL DI
ALS Vial : 25 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 11:09:08 2019
Quant Method : C:\msdchem\1\methods\VI190621G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Jun 21 11:04:13 2019
Response via : Initial Calibration

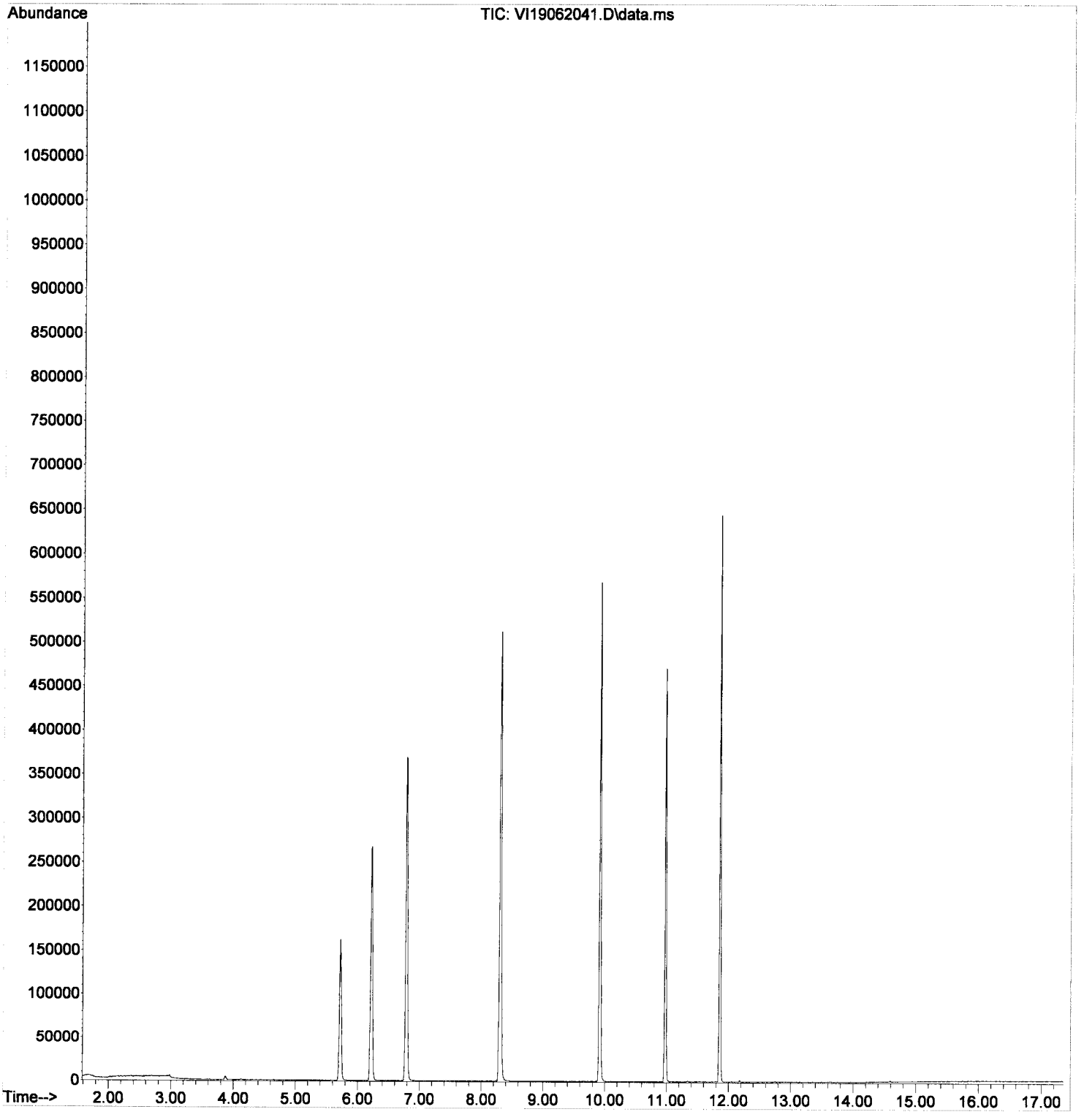
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.223	168	206455	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.789	114	345796	49.80	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.980	174	117310	48.60	ug/L	0.00
9) Toluene-d8 (NR)	8.303	98	403780	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.916	117	309053	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.856	150	217921	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.890	TIC	25801m	28.94	ug/L	
5) TPHg (C5-C9)	9.890	TIC	356995m	15.42	ug/L	
6) TPHg (C6-C10)	9.890	TIC	329511m	19.56	ug/L	
7) CA-LUFT (C5-C12)	9.890	TIC	395646m	18.89	ug/L	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062041.D
Acq On : 21 Jun 2019 3:43 am
Operator : MM
Sample : 9F20044-ICB1
Misc : 1X 5mL DI
ALS Vial : 25 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 11:09:08 2019
Quant Method : C:\msdchem\1\methods\VI190621G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Jun 21 11:04:13 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062042.D
Acq On : 21 Jun 2019 4:10 am
Operator : MM
Sample : 9F20044-CALC
Misc : 1X 5mL 50PPB GX
ALS Vial : 26 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 10:59:08 2019
Quant Method : C:\msdchem\1\methods\~~VI190621G~~.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue May 14 10:07:28 2019
Response via : Initial Calibration

MM 6/21/19

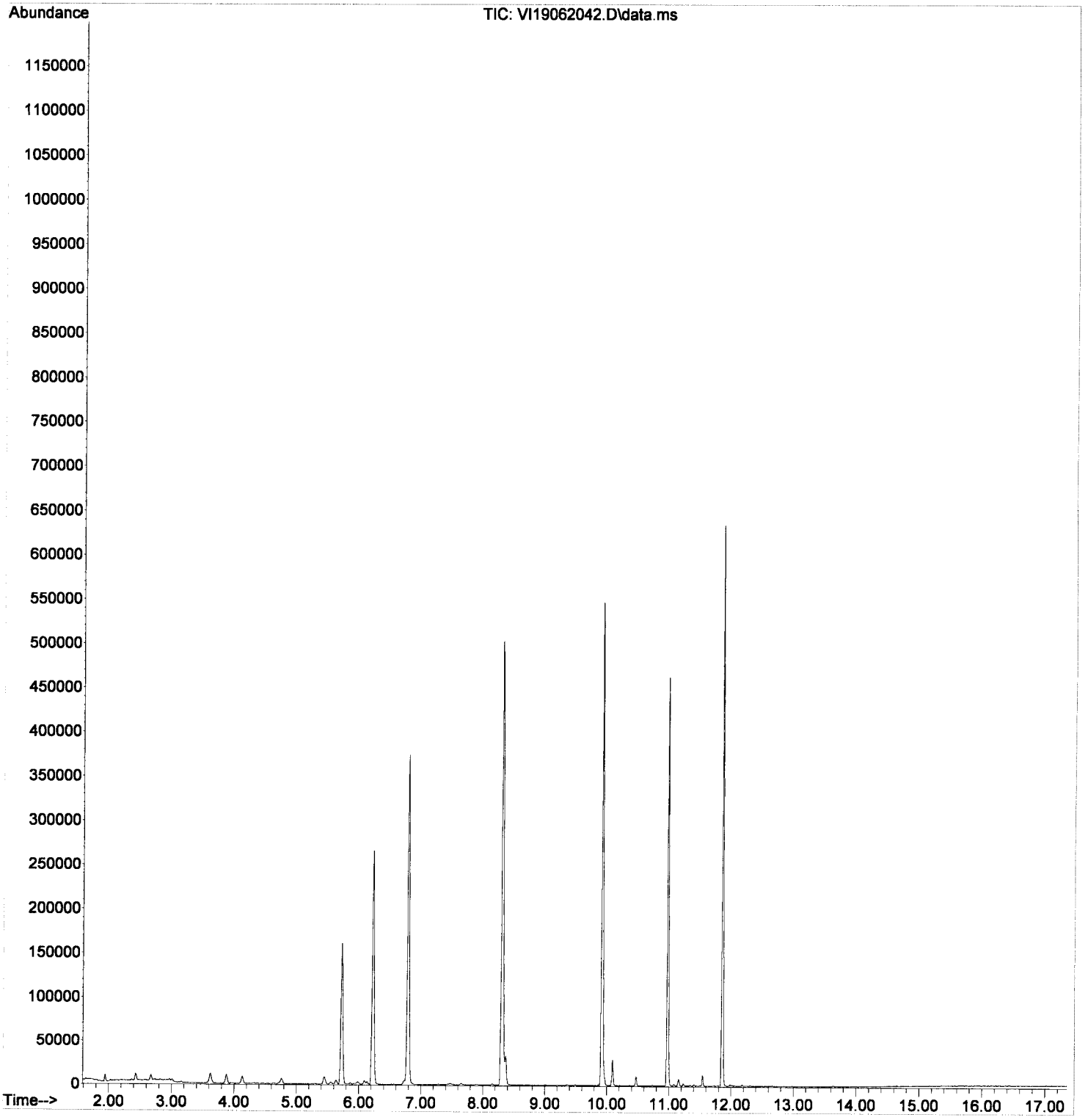
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.223	168	203678	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.789	114	341047	50.18	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.980	174	115213	53.16	ug/L	0.00
9) Toluene-d8 (NR)	8.304	98	399804	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.916	117	302490	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.856	150	214679	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.890	TIC	176842m	63.41	ug/L	
5) TPHg (C5-C9)	9.890	TIC	643841m	58.78	ug/L	
6) TPHg (C6-C10)	9.890	TIC	538437m	60.38	ug/L	
7) CA-LUFT (C5-C12)	9.890	TIC	724537m	62.81	ug/L	
8) Benzene (NR)	6.132	78	3039	No Calib		
10) Toluene (NR)	8.364	91	26286	No Calib		
13) Naphthalene (NR)	13.633	128	1041	No Calib	#	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062042.D
Acq On : 21 Jun 2019 4:10 am
Operator : MM
Sample : 9F20044-CALC
Misc : 1X 5mL 50PPB GX
ALS Vial : 26 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 10:59:08 2019
Quant Method : C:\msdchem\1\methods\VI190621G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue May 14 10:07:28 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062043.D
Acq On : 21 Jun 2019 4:37 am
Operator : MM
Sample : 9F20044-CALD
Misc : 1X 5mL 100PPB GX
ALS Vial : 27 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 10:59:11 2019
Quant Method : C:\msdchem\1\methods\VI190621G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue May 14 10:07:28 2019
Response via : Initial Calibration

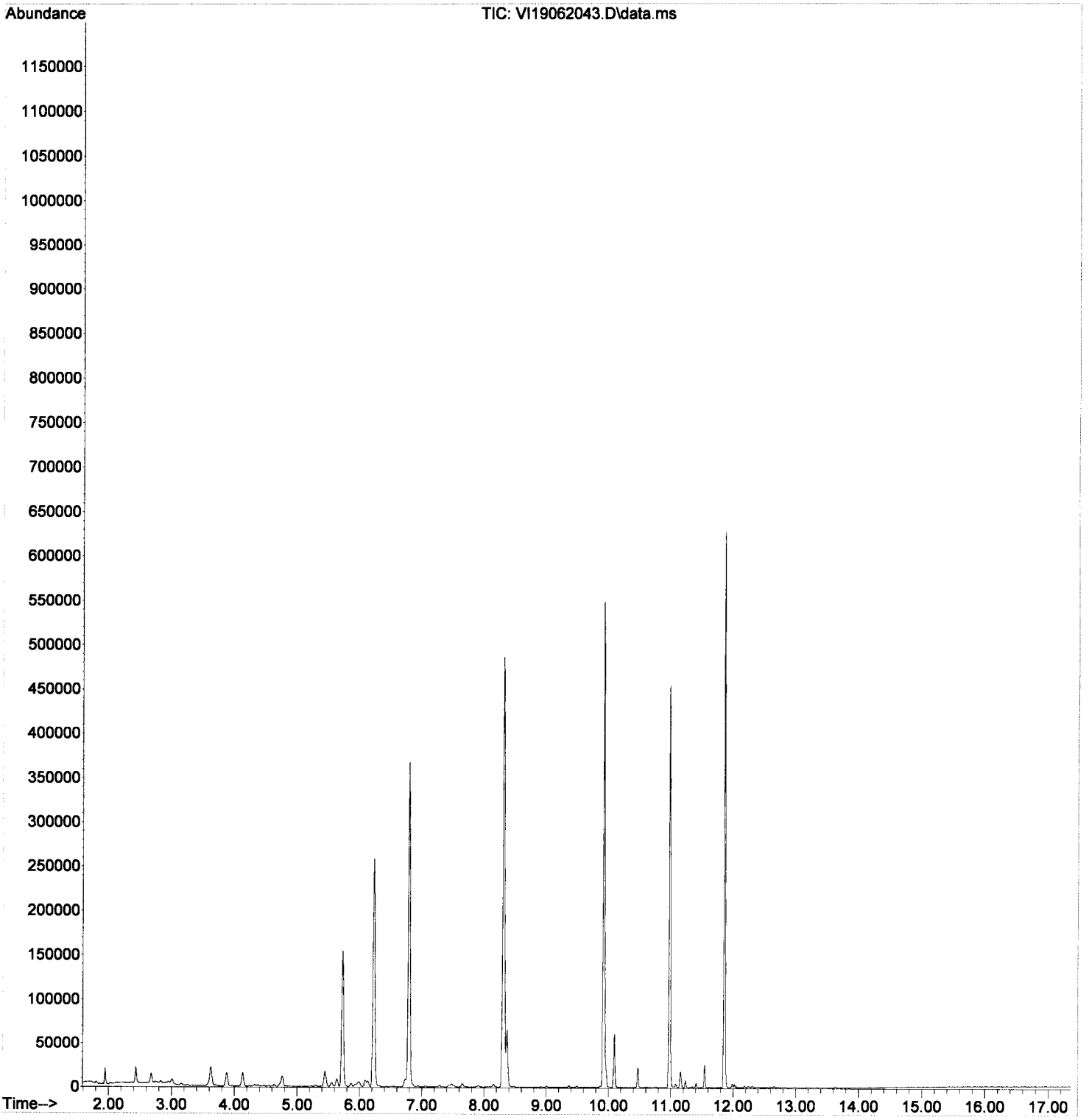
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.223	168	196555	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.789	114	330061	50.32	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.980	174	112452	53.77	ug/L	0.00
9) Toluene-d8 (NR)	8.304	98	386354	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.916	117	294827	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.856	150	209551	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.890	TIC	510164m	118.68	ug/L	
5) TPHg (C5-C9)	9.890	TIC	1047532m	112.79	ug/L	
6) TPHg (C6-C10)	9.890	TIC	885590m	115.27	ug/L	
7) CA-LUFT (C5-C12)	9.890	TIC	1190862m	114.89	ug/L	
8) Benzene (NR)	6.132	78	6268	No Calib		
10) Toluene (NR)	8.364	91	54019	No Calib		
13) Naphthalene (NR)	13.633	128	1425	No Calib	#	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062043.D
Acq On : 21 Jun 2019 4:37 am
Operator : MM
Sample : 9F20044-CALD
Misc : 1X 5mL 100PPB GX
ALS Vial : 27 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 10:59:11 2019
Quant Method : C:\msdchem\1\methods\VI190621G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue May 14 10:07:28 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062044.D
Acq On : 21 Jun 2019 5:04 am
Operator : MM
Sample : 9F20044-CALE
Misc : 1X 5mL 250PPB GX
ALS Vial : 28 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 10:59:14 2019
Quant Method : C:\msdchem\1\methods\~~VI190621G~~.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue May 14 10:07:28 2019
Response via : Initial Calibration

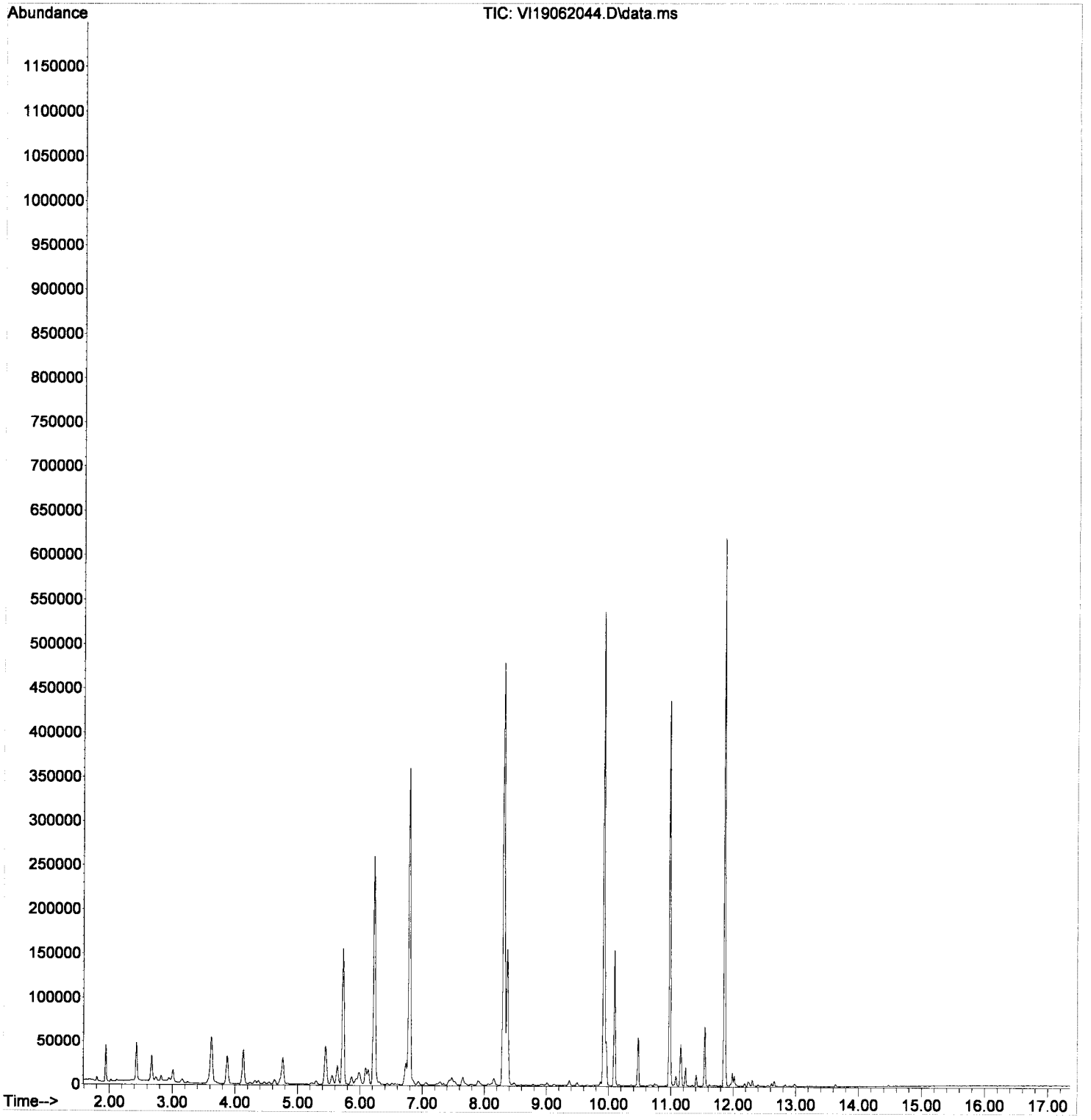
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.223	168	194307	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.789	114	325280	50.16	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.980	174	110399	53.40	ug/L	0.00
9) Toluene-d8 (NR)	8.304	98	382210	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.922	117	291147	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.856	150	208338	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.890	TIC	1404577m	266.52	ug/L	
5) TPHg (C5-C9)	9.890	TIC	2231124m	265.82	ug/L	
6) TPHg (C6-C10)	9.890	TIC	1874608m	266.61	ug/L	
7) CA-LUFT (C5-C12)	9.890	TIC	2573247m	264.21	ug/L	
8) Benzene (NR)	6.132	78	15186	No Calib		
10) Toluene (NR)	8.364	91	131757	No Calib		
13) Naphthalene (NR)	13.633	128	2842	No Calib	#	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062044.D
Acq On : 21 Jun 2019 5:04 am
Operator : MM
Sample : 9F20044-CALE
Misc : 1X 5mL 250PPB GX
ALS Vial : 28 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 10:59:14 2019
Quant Method : C:\msdchem\1\methods\VI190621G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue May 14 10:07:28 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062045.D
Acq On : 21 Jun 2019 5:31 am
Operator : MM
Sample : 9F20044-CALF
Misc : 1X 5mL 500PPB GX
ALS Vial : 29 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 10:59:17 2019
Quant Method : C:\msdchem\1\methods\VI190621G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue May 14 10:07:28 2019
Response via : Initial Calibration

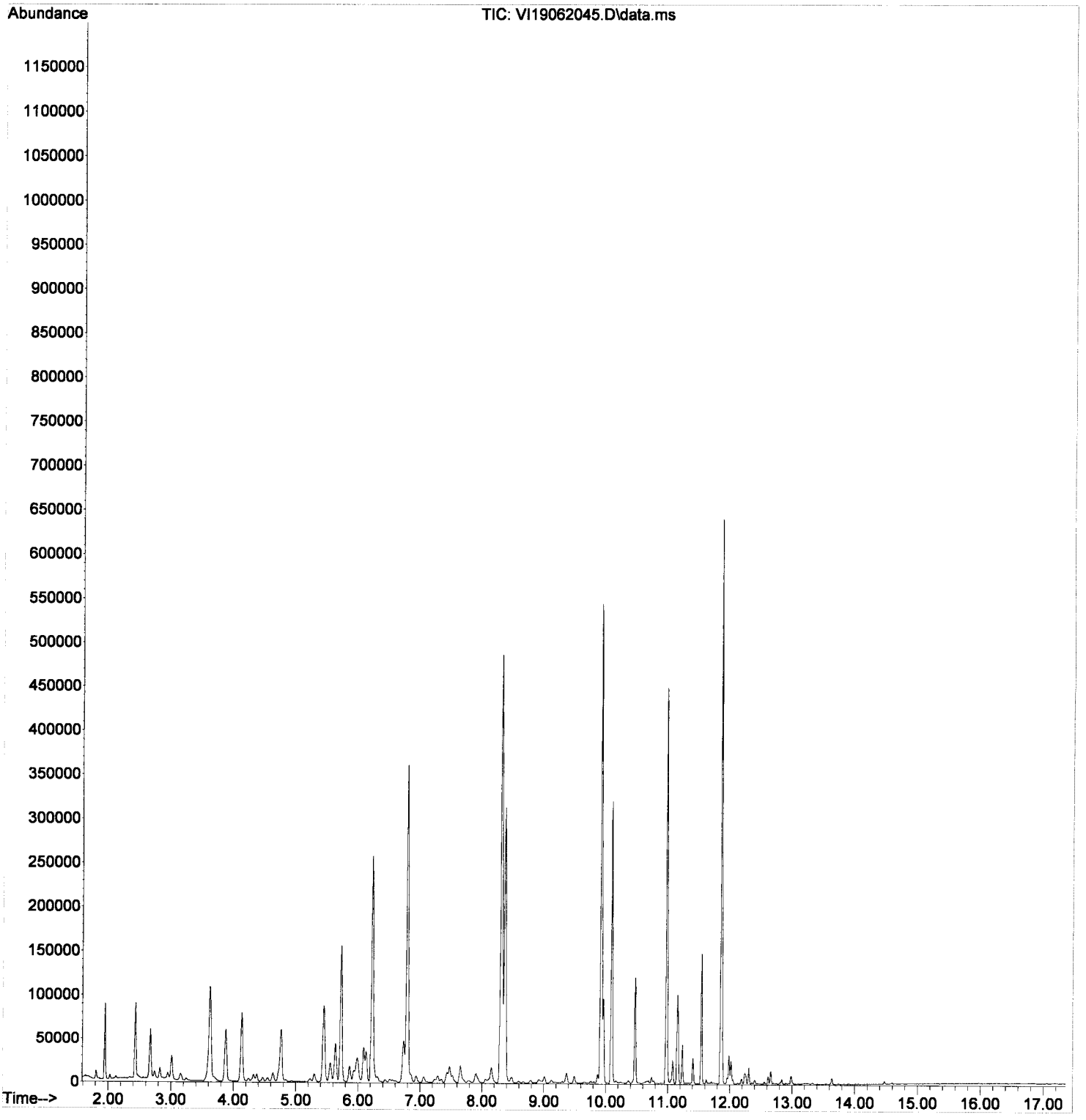
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.223	168	193440	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.789	114	322266	49.92	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.980	174	112659	54.74	ug/L	0.00
9) Toluene-d8 (NR)	8.304	98	383925	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.916	117	293849	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.856	150	214766	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.890	TIC	3050984m	537.56	ug/L	
5) TPHg (C5-C9)	9.890	TIC	4250064m	525.96	ug/L	
6) TPHg (C6-C10)	9.890	TIC	3614041m	531.70	ug/L	
7) CA-LUFT (C5-C12)	9.890	TIC	5033567m	528.74	ug/L	
8) Benzene (NR)	6.132	78	30256	No Calib		
10) Toluene (NR)	8.364	91	270787	No Calib		
13) Naphthalene (NR)	13.633	128	5779	No Calib	#	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062045.D
Acq On : 21 Jun 2019 5:31 am
Operator : MM
Sample : 9F20044-CALF
Misc : 1X 5mL 500PPB GX
ALS Vial : 29 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 10:59:17 2019
Quant Method : C:\msdchem\1\methods\VI190621G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue May 14 10:07:28 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062046.D
Acq On : 21 Jun 2019 5:58 am
Operator : MM
Sample : 9F20044-CALG
Misc : 1X 5mL 1000PPB GX
ALS Vial : 30 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 10:59:20 2019
Quant Method : C:\msdchem\1\methods\~~VI190621~~G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue May 14 10:07:28 2019
Response via : Initial Calibration

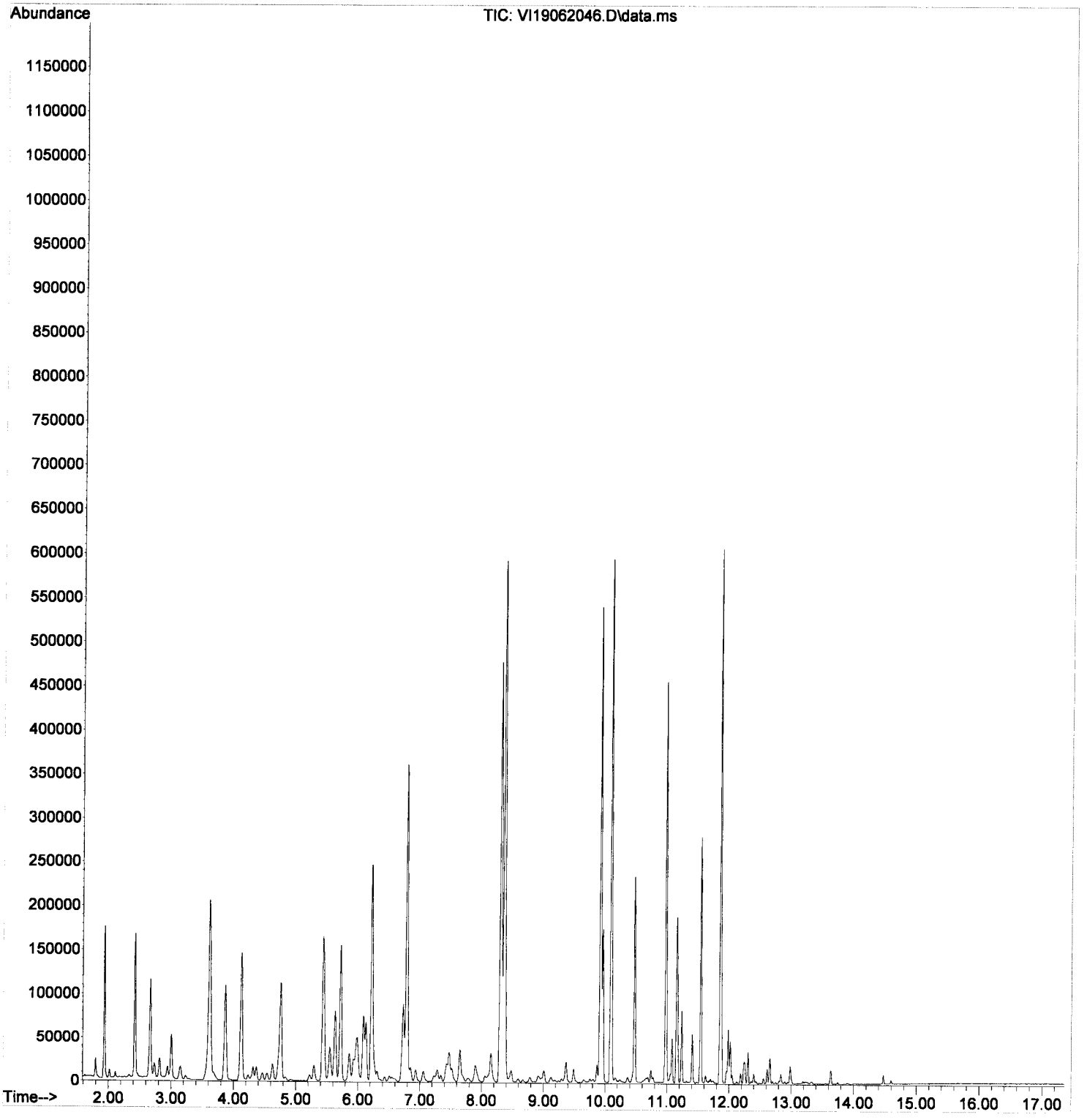
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.223	168	188214	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.789	114	317178	50.50	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.980	174	110284	55.07	ug/L	0.00
9) Toluene-d8 (NR)	8.304	98	373528	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.916	117	285367	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.856	150	207795	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.890	TIC	5817074m	1012.82	ug/L	
5) TPHg (C5-C9)	9.890	TIC	7801161m	1006.66	ug/L	
6) TPHg (C6-C10)	9.890	TIC	6627134m	1013.93	ug/L	
7) CA-LUFT (C5-C12)	9.890	TIC	9289018m	1008.40	ug/L	
8) Benzene (NR)	6.126	78	59310	No Calib		
10) Toluene (NR)	8.364	91	517739	No Calib		
13) Naphthalene (NR)	13.633	128	12001	No Calib		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062046.D
Acq On : 21 Jun 2019 5:58 am
Operator : MM
Sample : 9F20044-CALG
Misc : 1X 5mL 1000PPB GX
ALS Vial : 30 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 10:59:20 2019
Quant Method : C:\msdchem\1\methods\VI190621G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue May 14 10:07:28 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062047.D
Acq On : 21 Jun 2019 6:25 am
Operator : MM
Sample : 9F20044-CALH
Misc : 1X 5mL 2500PPB GX
ALS Vial : 31 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 10:59:23 2019
Quant Method : C:\msdchem\1\methods\VI190621G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue May 14 10:07:28 2019
Response via : Initial Calibration

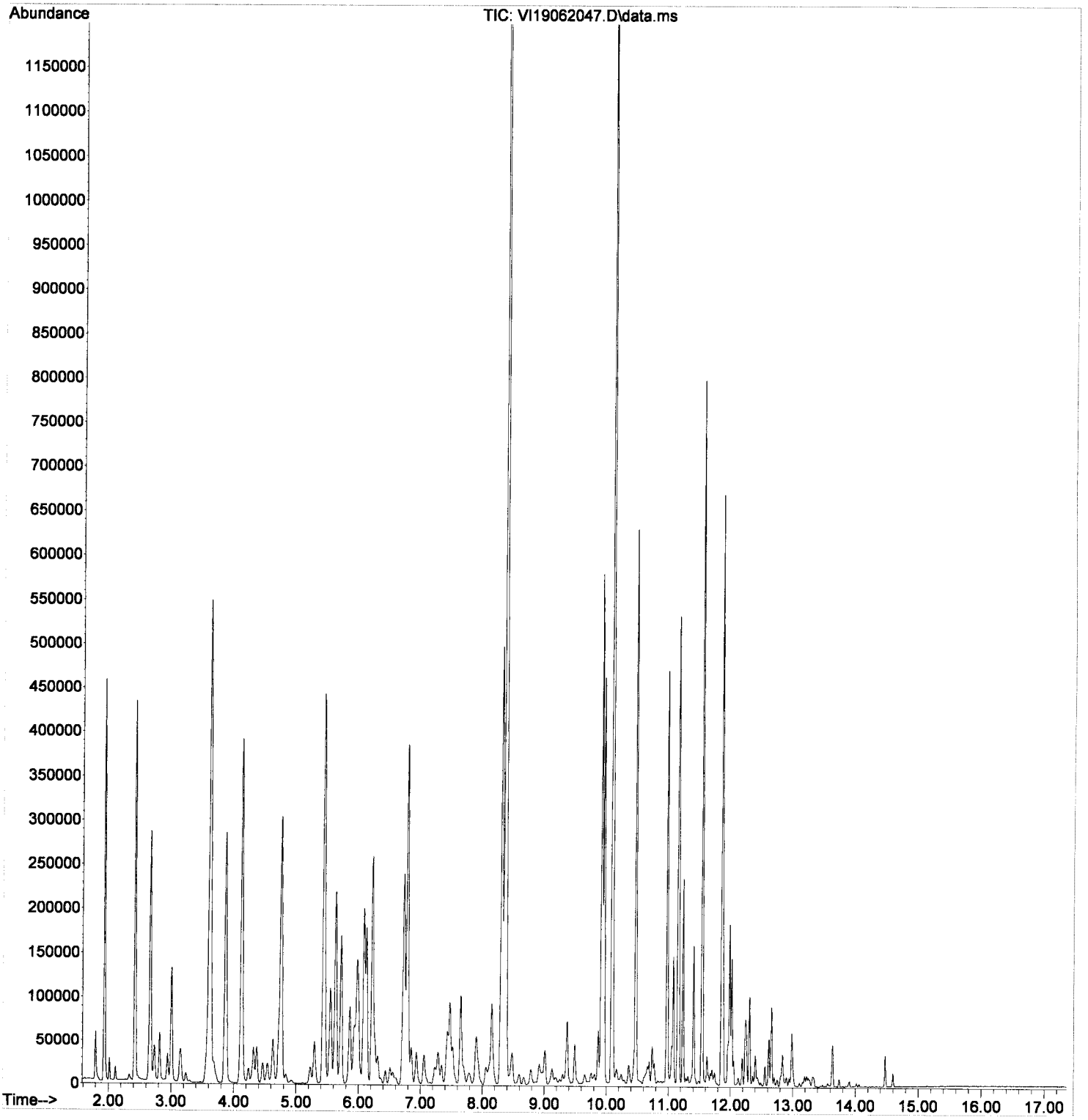
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.223	168	197104	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.789	114	328682	49.97	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.980	174	116804	55.70	ug/L	0.00
9) Toluene-d8 (NR)	8.303	98	388714	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.916	117	302739	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.856	150	224410	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.890	TIC	16138061m	2570.24	ug/L	
5) TPHg (C5-C9)	9.890	TIC	20687524m	2553.13	ug/L	
6) TPHg (C6-C10)	9.890	TIC	17492230m	2552.90	ug/L	
7) CA-LUFT (C5-C12)	9.890	TIC	25003365m	2571.68	ug/L	
8) Benzene (NR)	6.126	78	153910	No Calib		
10) Toluene (NR)	8.364	91	1344333	No Calib		
13) Naphthalene (NR)	13.633	128	33340	No Calib		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062047.D
Acq On : 21 Jun 2019 6:25 am
Operator : MM
Sample : 9F20044-CALH
Misc : 1X 5mL 2500PPB GX
ALS Vial : 31 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 10:59:23 2019
Quant Method : C:\msdchem\1\methods\VI190621G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue May 14 10:07:28 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062048.D
Acq On : 21 Jun 2019 6:52 am
Operator : MM
Sample : 9F20044-CALI
Misc : 1X 5mL 5000PPB GX
ALS Vial : 32 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 10:59:26 2019
Quant Method : C:\msdchem\1\methods\VI190621G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue May 14 10:07:28 2019
Response via : Initial Calibration

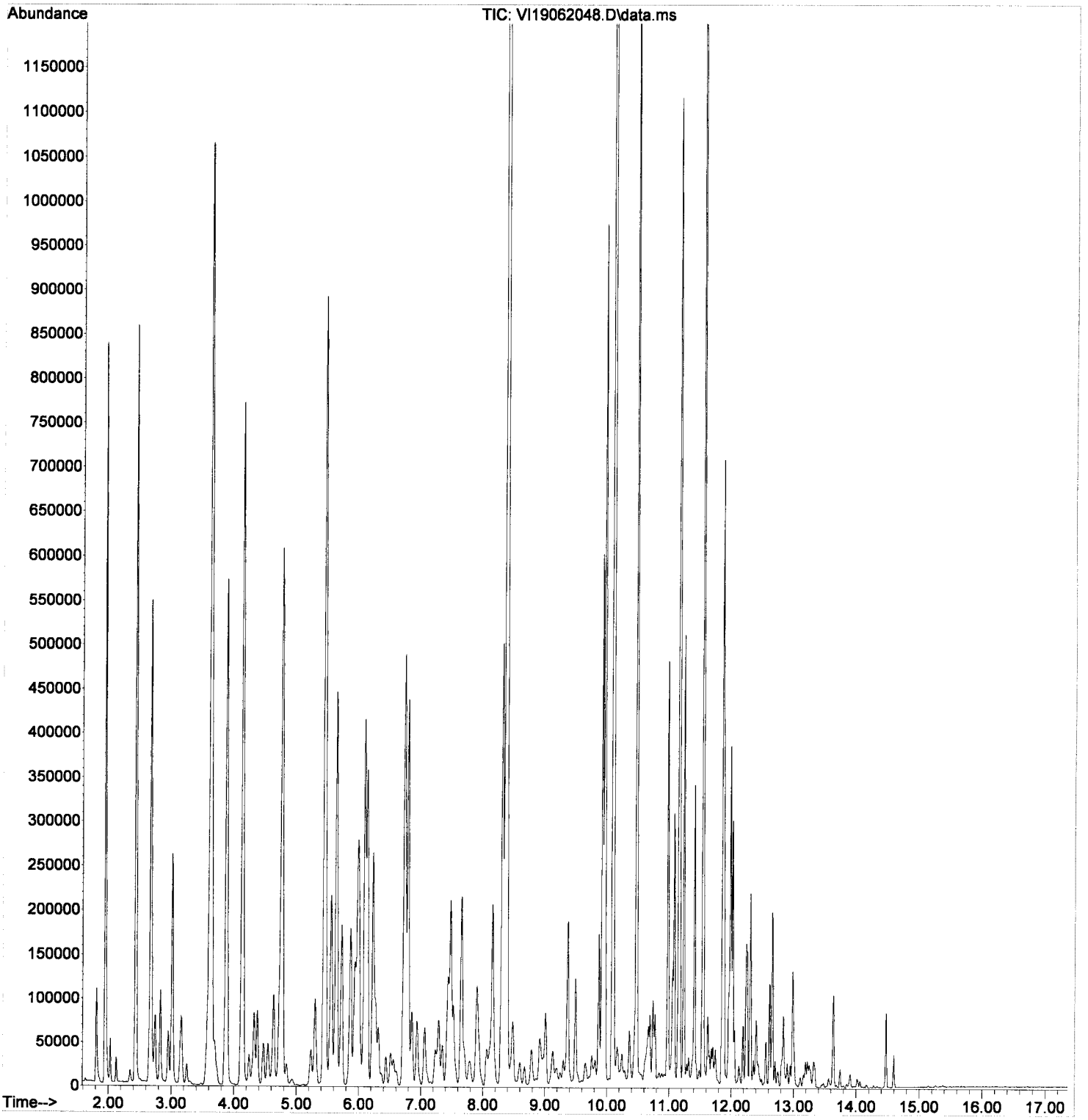
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.223	168	197272	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.789	114	334265	50.78	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.980	174	119127	56.75	ug/L	0.00
9) Toluene-d8 (NR)	8.310	98	393564	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.916	117	305618	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.856	150	227854	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.890	TIC	34154824m	5211.75	ug/L	
5) TPHg (C5-C9)	9.890	TIC	42062909m	5119.91	ug/L	
6) TPHg (C6-C10)	9.890	TIC	35589326m	5111.36	ug/L	
7) CA-LUFT (C5-C12)	9.890	TIC	51341556m	5163.61	ug/L	
8) Benzene (NR)	6.132	78	315557	No Calib		
10) Toluene (NR)	8.364	91	2768205	No Calib		
13) Naphthalene (NR)	13.633	128	74373	No Calib		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062048.D
Acq On : 21 Jun 2019 6:52 am
Operator : MM
Sample : 9F20044-CALI
Misc : 1X 5mL 5000PPB GX
ALS Vial : 32 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 10:59:26 2019
Quant Method : C:\msdchem\1\methods\VI190621G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue May 14 10:07:28 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062049.D
Acq On : 21 Jun 2019 7:19 am
Operator : MM
Sample : 9F20044-CALJ
Misc : 1X 5mL 10000PPB GX
ALS Vial : 33 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 10:59:29 2019
Quant Method : C:\msdchem\1\methods\VI190621G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue May 14 10:07:28 2019
Response via : Initial Calibration

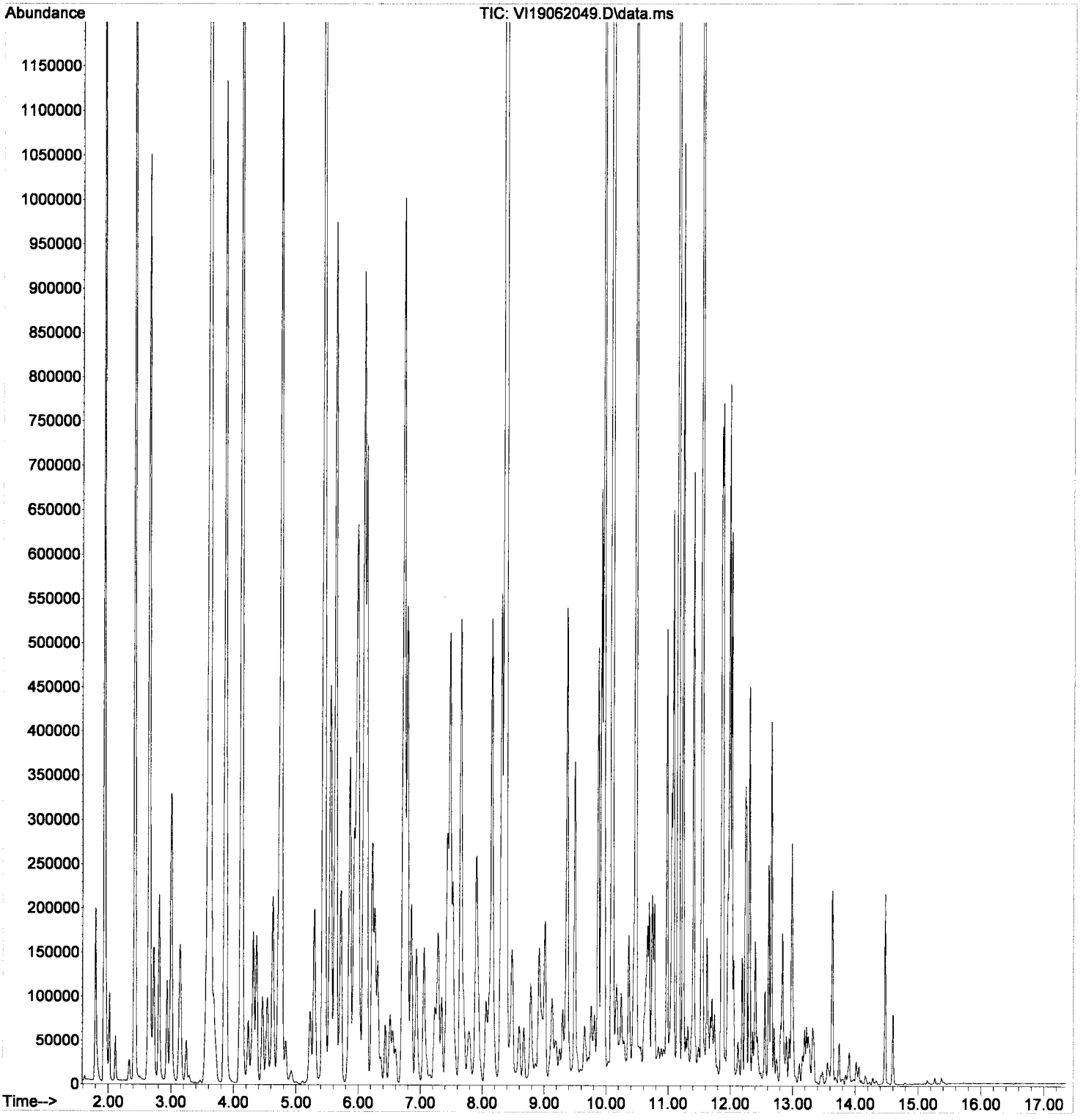
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.223	168	203972	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.783	114	349364	51.33	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.980	174	123534	56.92	ug/L	0.00
9) Toluene-d8 (NR)	8.304	98	412638	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.916	117	319888	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.856	150	236219	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.890	TIC	70317963m	9767.23	ug/L	
5) TPHg (C5-C9)	9.890	TIC	86326990m	9875.56	ug/L	
6) TPHg (C6-C10)	9.890	TIC	73549856m	9891.96	ug/L	
7) CA-LUFT (C5-C12)	9.890	TIC	105779948m	9877.94	ug/L	
8) Benzene (NR)	6.126	78	624604	No Calib		
10) Toluene (NR)	8.364	91	5449592	No Calib		
13) Naphthalene (NR)	13.633	128	157135	No Calib		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062049.D
Acq On : 21 Jun 2019 7:19 am
Operator : MM
Sample : 9F20044-CALJ
Misc : 1X 5mL 10000PPB GX
ALS Vial : 33 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 10:59:29 2019
Quant Method : C:\msdchem\1\methods\VI190621G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue May 14 10:07:28 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062050.D
Acq On : 21 Jun 2019 7:46 am
Operator : MM
Sample : 9F20044-IBL8
Misc : 1X 5mL DI
ALS Vial : 34 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 11:09:19 2019
Quant Method : C:\msdchem\1\methods\VI190621G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Jun 21 11:04:13 2019
Response via : Initial Calibration

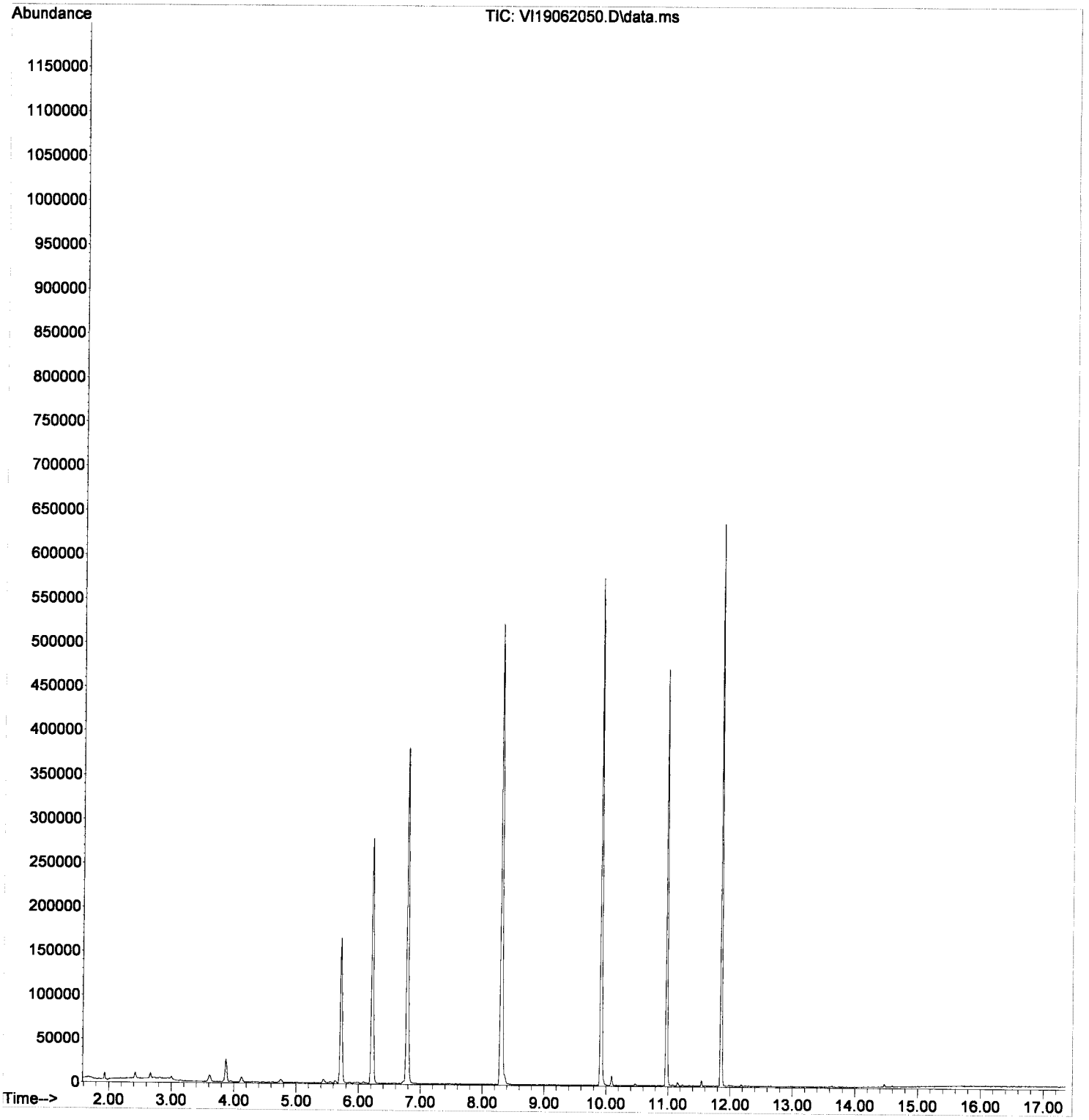
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.223	168	217202	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.789	114	362588	49.63	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.980	174	120633	47.51	ug/L	0.00
9) Toluene-d8 (NR)	8.303	98	418549	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.915	117	319447	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.856	150	223463	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.890	TIC	97363m	38.71	ug/L	
5) TPHg (C5-C9)	9.890	TIC	553329m	35.12	ug/L	
6) TPHg (C6-C10)	9.890	TIC	443327m	32.25	ug/L	
7) CA-LUFT (C5-C12)	9.890	TIC	612105m	36.89	ug/L	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062050.D
Acq On : 21 Jun 2019 7:46 am
Operator : MM
Sample : 9F20044-IBL8
Misc : 1X 5mL DI
ALS Vial : 34 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 11:09:19 2019
Quant Method : C:\msdchem\1\methods\VI190621G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Jun 21 11:04:13 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062051.D
Acq On : 21 Jun 2019 8:13 am
Operator : MM
Sample : 9F20044-IBL9
Misc : 1X 5mL DI
ALS Vial : 35 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 11:09:22 2019
Quant Method : C:\msdchem\1\methods\VI190621G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Jun 21 11:04:13 2019
Response via : Initial Calibration

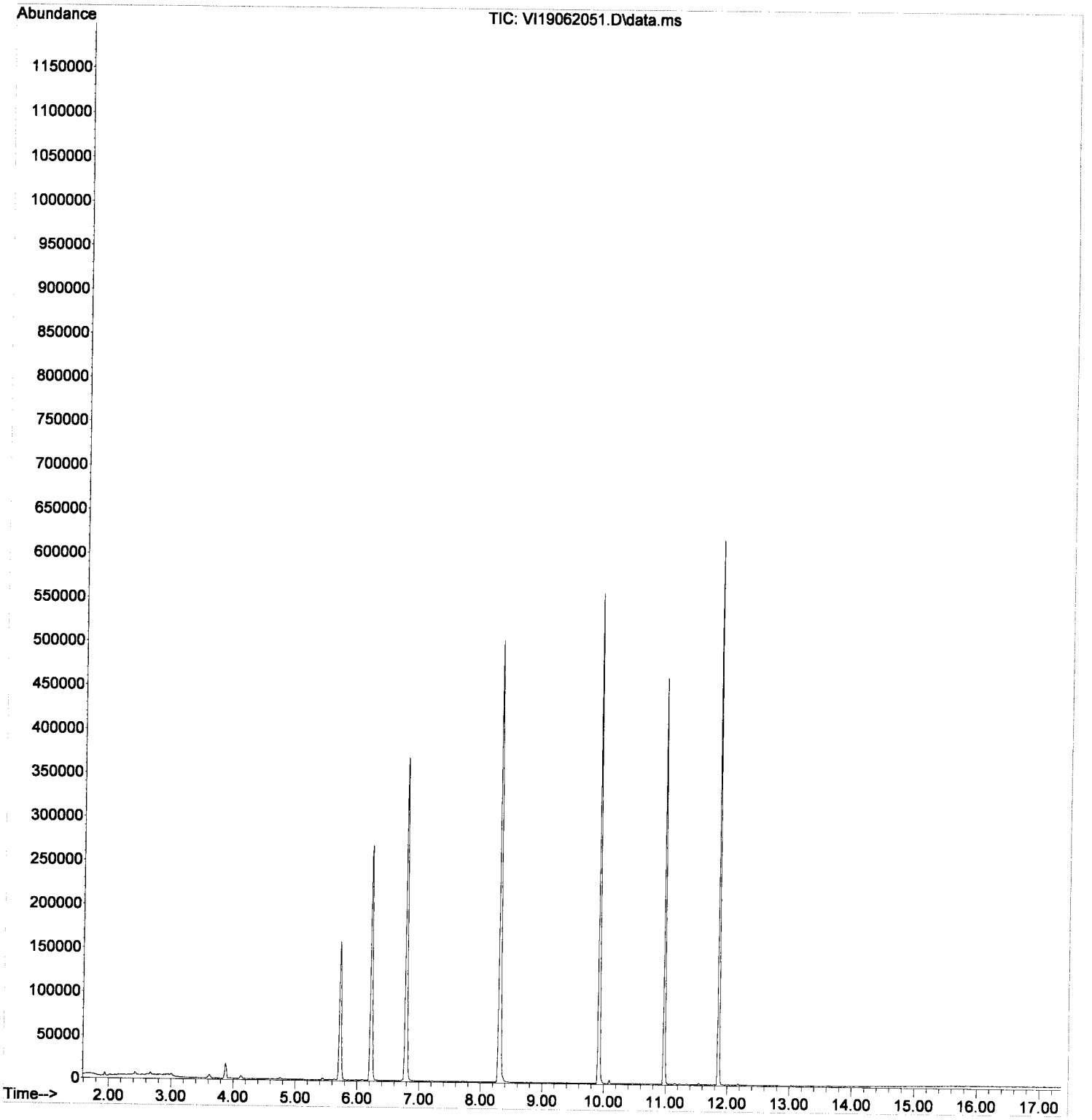
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.223	168	209371	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.789	114	347135	49.29	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.980	174	118433	48.38	ug/L	0.00
9) Toluene-d8 (NR)	8.303	98	405184	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.916	117	308837	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.856	150	217289	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.890	TIC	45758m	31.77	ug/L	
5) TPHg (C5-C9)	9.890	TIC	512154m	32.68	ug/L	
6) TPHg (C6-C10)	9.890	TIC	363119m	23.50	ug/L	
7) CA-LUFT (C5-C12)	9.890	TIC	552083m	33.27	ug/L	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062051.D
Acq On : 21 Jun 2019 8:13 am
Operator : MM
Sample : 9F20044-IBL9
Misc : 1X 5mL DI
ALS Vial : 35 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 11:09:22 2019
Quant Method : C:\msdchem\1\methods\VI190621G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Jun 21 11:04:13 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062052.D
Acq On : 21 Jun 2019 8:40 am
Operator : MM
Sample : 9F20044-ICV3
Misc : 1X 5mL 500PPB GX
ALS Vial : 36 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 11:09:25 2019
Quant Method : C:\msdchem\1\methods\VI190621G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Jun 21 11:04:13 2019
Response via : Initial Calibration

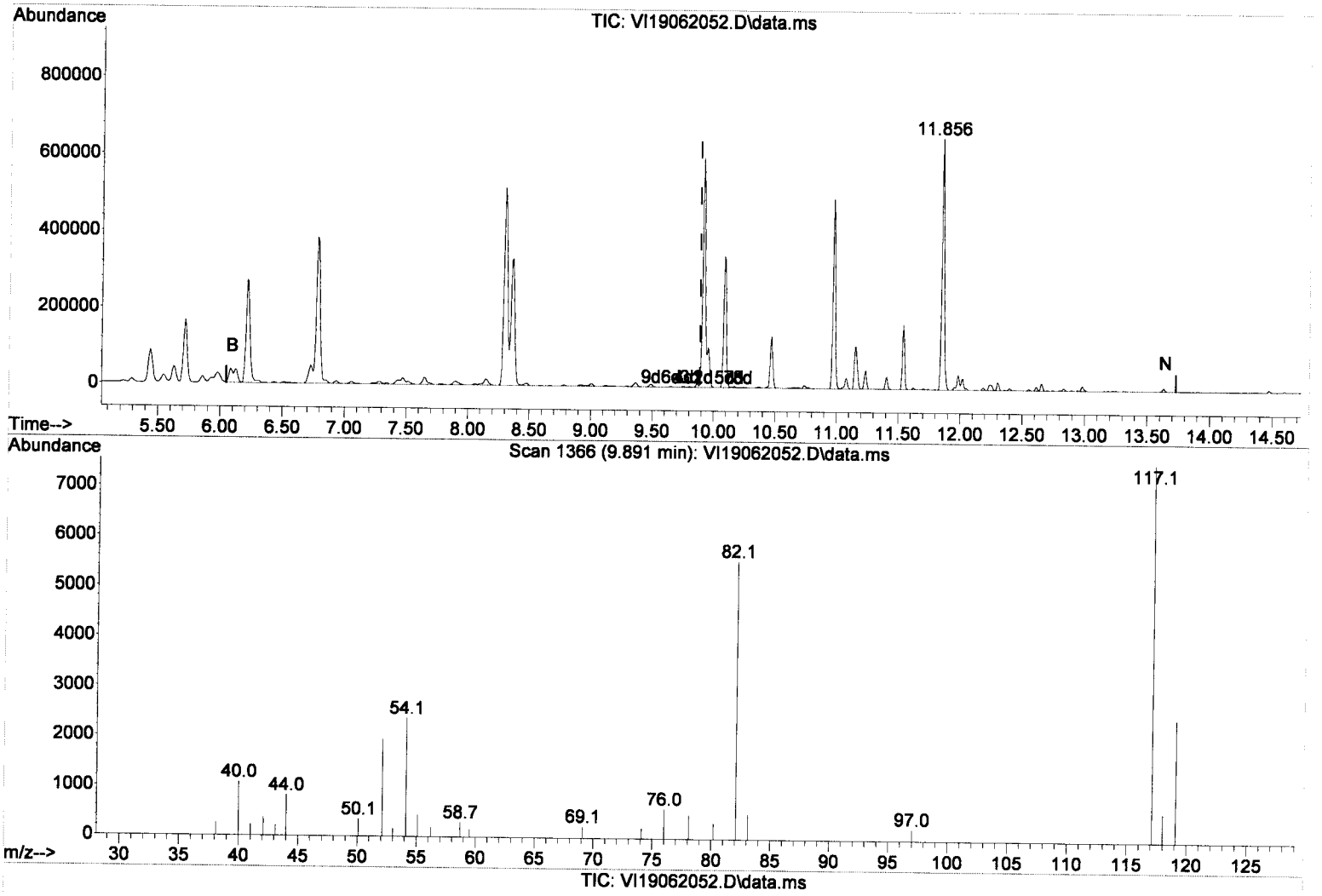
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.223	168	208499	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.789	114	350185	49.94	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.974	174	121204	49.72	ug/L	0.00
9) Toluene-d8 (NR)	8.303	98	408887	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.916	117	316434	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.856	150	229291	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.890	TIC	3227397m	491.69	ug/L	
5) TPHg (C5-C9)	9.890	TIC	4293325m	469.25	ug/L	
6) TPHg (C6-C10)	9.890	TIC	3766154m	488.49	ug/L	
7) CA-LUFT (C5-C12)	9.890	TIC	5105856m	468.94	ug/L	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062052.D
Acq On : 21 Jun 2019 8:40 am
Operator : MM
Sample : 9F20044-ICV3
Misc : 1X 5mL 500PPB GX
ALS Vial : 36 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 11:09:25 2019
Quant Method : C:\msdchem\1\methods\VI190621G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Jun 21 11:04:13 2019
Response via : Initial Calibration



(4) NWTPH-Gx (TPH) (H)

9.890min (0.000) 491.69 ug/L m

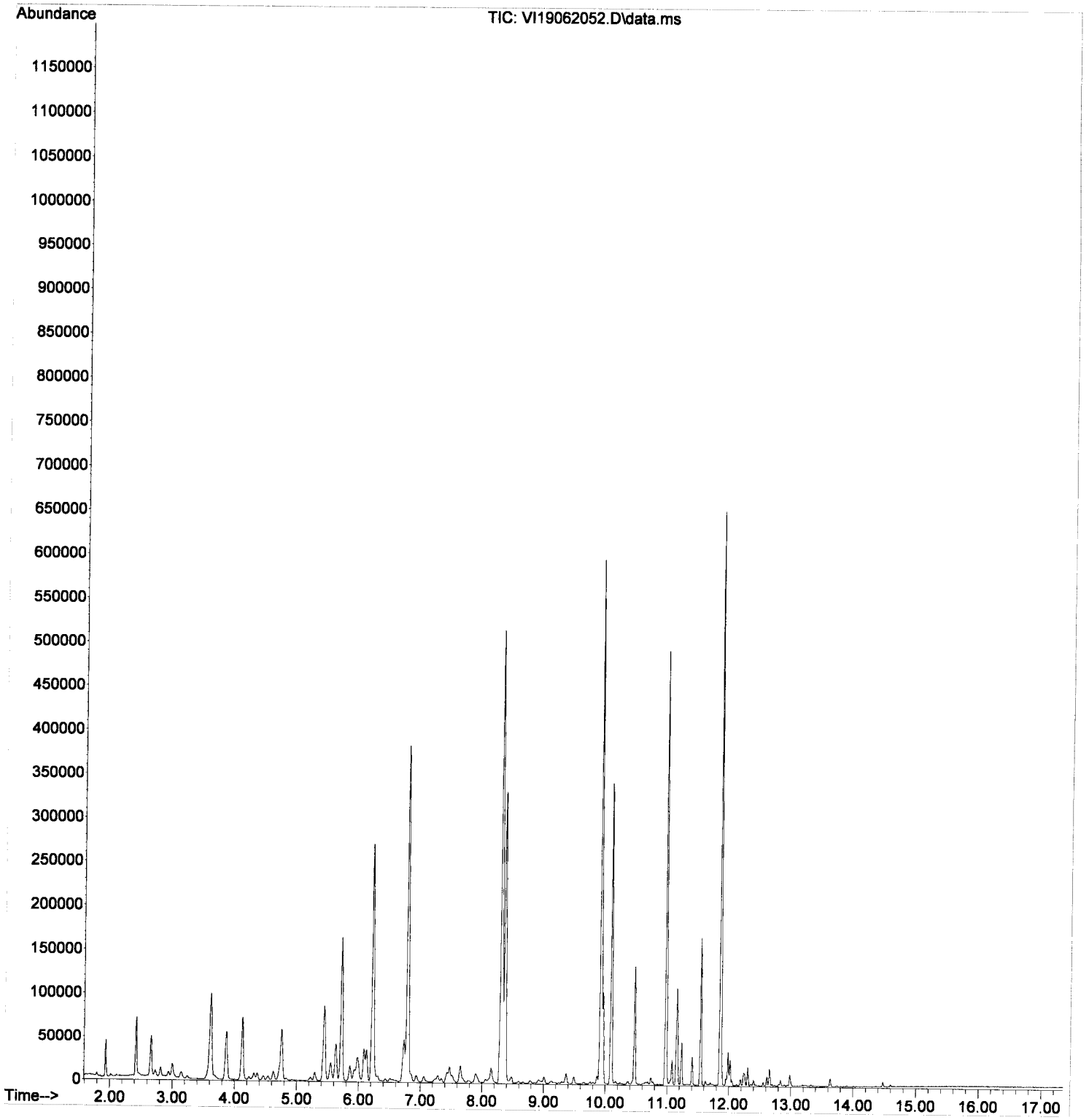
response 3227397

Signal	Exp%	Act%
TIC	100.00	100.00
0.00	0.00	0.02#
0.00	0.00	0.01#
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062052.D
Acq On : 21 Jun 2019 8:40 am
Operator : MM
Sample : 9F20044-ICV3
Misc : 1X 5mL 500PPB GX
ALS Vial : 36 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 11:09:25 2019
Quant Method : C:\msdchem\1\methods\VI190621G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Jun 21 11:04:13 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062053.D
Acq On : 21 Jun 2019 9:08 am
Operator : MM
Sample : 9F20044-IBLA
Misc : 1X 5mL DI
ALS Vial : 37 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 11:09:28 2019
Quant Method : C:\msdchem\1\methods\VI190621G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Jun 21 11:04:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.223	168	202087	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.789	114	337807	49.70	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.974	174	114849	48.61	ug/L	0.00
9) Toluene-d8 (NR)	8.304	98	395036	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.916	117	302127	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.857	150	211115	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.890	TIC	-15516m	22.85	ug/L	
5) TPHg (C5-C9)	9.890	TIC	477707m	30.70	ug/L	
6) TPHg (C6-C10)	9.890	TIC	342314m	22.35	ug/L	
7) CA-LUFT (C5-C12)	9.890	TIC	459379m	26.01	ug/L	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-06\9F20044\
Data File : VI19062053.D
Acq On : 21 Jun 2019 9:08 am
Operator : MM
Sample : 9F20044-IBLA
Misc : 1X 5mL DI
ALS Vial : 37 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Jun 21 11:09:28 2019
Quant Method : C:\msdchem\1\methods\VI190621G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Jun 21 11:04:13 2019
Response via : Initial Calibration